

Final Second Quarter 2015 - Quarterly Groundwater Monitoring Report Inside Tunnel Wells

**Red Hill Bulk Fuel Storage Facility
Joint Base Pearl Harbor-Hickam, Oahu, Hawaii**

DOH Facility ID No.: 9-102271

DOH Release ID No.: 990051, 010011, 020028, and 140010

August 2015

**Department of the Navy
Naval Facilities Engineering Command, Hawaii
400 Marshall Road
JBPHH HI 96860-3139**



Contract Number N62742-12-D-1853, CTO 0002

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Prepared for:



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Naval Facilities Engineering Command, Hawaii
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Prepared under:

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FINAL
SECOND QUARTER 2015 - QUARTERLY GROUNDWATER MONITORING REPORT
INSIDE TUNNEL WELLS
RED HILL BULK FUEL STORAGE FACILITY

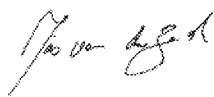
Long-Term Groundwater and Soil Vapor Monitoring
Red Hill Bulk Fuel Storage Facility
Joint Base Pearl Harbor-Hickam, Oahu, Hawaii

Prepared for:
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ACRONYMS AND ABBREVIATIONS

ACRONYMS/ ABBREVIATIONS	DEFINITION/MEANING
bgs	below ground surface
CCV	Continuing Calibration Verification
COPC	Contaminant of Potential Concern
DLNR	State of Hawaii Department of Land and Natural Resources
DoD	Department of Defense
DOH	State of Hawaii Department of Health
DON	Department of the Navy
EAL	Environmental Action Level
EPA	Environmental Protection Agency
ESI	Environmental Science International, Inc.
F-76	Marine Diesel Fuel
ID	Identification
JBPHH	Joint Base Pearl Harbor-Hickam
JP-5	Jet Fuel Propellant-5
JP-8	Jet Fuel Propellant-8
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
µg/L	micrograms per liter
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NAVFAC	Naval Facilities Engineering Command
NAVSUP FLC	Naval Supply Systems Command Fleet Logistics Center
PAH	Polycyclic Aromatic Hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Completeness, Comparability, and Sensitivity
pH	hydrogen activity
QSM	Quality Systems Manual
QC	Quality Control
RHSF	Red Hill Bulk Fuel Storage Facility
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SSRBL	Site-Specific Risk-Based Level
TEC	The Environmental Company, Inc.
TPH	Total Petroleum Hydrocarbons
TPH-d	Total Petroleum Hydrocarbons as diesel
TPH-g	Total Petroleum Hydrocarbons as gasoline
TPH-o	Total Petroleum Hydrocarbons as oil
U.S.	United States of America
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WP	Work Plan

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EXECUTIVE SUMMARY

This quarterly groundwater monitoring report presents the results of the second quarter 2015 groundwater sampling event, conducted on April 20 and 21, 2015, at the Red Hill Bulk Fuel Storage Facility [RHSF], Joint Base Pearl Harbor-Hickam [JBPHH], Hawaii. The RHSF is located in Halawa Heights on the Island of Oahu. There are 18 active and 2 inactive Underground Storage Tanks [USTs] located at the RHSF. The State of Hawaii Department of Health [DOH] Facility Identification [ID] number is 9-102271. The DOH Release ID numbers are 990051, 010011, 020028, and 140010.

The groundwater sampling was conducted as part of the long-term groundwater and soil vapor monitoring program at the RHSF and concurrent with release response activities initiated at Tank 5 in January 2014, for Naval Supply Systems Command Fleet Logistics Center [NAVSUP FLC] Pearl Harbor (formerly Fleet and Industrial Supply Center), under Naval Facilities Engineering Command [NAVFAC] Contract Number N62742-12-D-1853. The sampling was conducted in accordance with the approved 2012 Work Plan [WP]/Sampling and Analysis Plan [SAP] prepared by Environmental Science International, Inc. [ESI].

On April 20 and 21, 2015, ESI personnel collected groundwater samples from four monitoring wells at the RHSF (wells RHMW01, RHMW02, RHMW03, and RHMW05) and one sampling point at Red Hill Shaft (RHMW2254-01). One primary and one duplicate sample were collected from well RHMW02.

Analytical results were compared to DOH Tier 1 Environmental Action Levels [EALs]. Previously, results were only compared to EALs for gross contamination and drinking water toxicity; however, beginning with this report, the DOH Tier 1 EALs, which also incorporate aquatic habitat goals in addition to gross contamination and drinking water toxicity, were used. Additionally, the analytical results were compared to DOH Tier 1 EALs specific to the sample locations distance to the nearest surface water, whether greater or less than 150 meters. Wells RHMW01, RHMW02, RHMW03, and RHMW05 are each more than 150 meters from the nearest surface water (Halawa Stream). Sample point RHMW2254-01 is located within 150 meters of the nearest surface water (Halawa Stream). Analytical results for wells RHMW01, RHMW02, RHMW03, and RHMW05 were also compared to the site-specific risk-based level [SSRBLs] for Total Petroleum Hydrocarbons [TPH] (4,500 micrograms per liter [$\mu\text{g/L}$]) and benzene (750 $\mu\text{g/L}$), established in the RHSF Final Groundwater Protection Plan. A summary of the analytical results is provided below.

- **RHMW01** – The only analytes detected in groundwater were TPH as diesel [TPH-d] (170 $\mu\text{g/L}$), TPH as oil [TPH-o] (23 $\mu\text{g/L}$), several polycyclic aromatic hydrocarbons [PAHs], and lead (0.624 $\mu\text{g/L}$). The concentration of TPH-d exceeded the DOH Tier 1 EAL, but did not exceed the SSRBL. The TPH-d concentration detected during this event was the highest since January 2014; however, TPH-d concentrations in this well have shown an overall decreasing trend from a high of 1,500 $\mu\text{g/L}$ in February 2005.

- **RHMW02** – Concentrations of TPH-d (5,200 and 5,400 µg/L), TPH-o (360 µg/L in both primary and duplicate samples), 1-methylnaphthalene (31 and 68 µg/L), 2-methylnaphthalene (15 and 37 µg/L), and naphthalene (39 and 140 µg/L) were detected in both the primary and duplicate samples collected exceeding their respective DOH Tier 1 EALs. The concentrations of TPH-d also exceeded the SSRBL of 4,500 µg/L. Concentrations of TPH as gasoline [TPH-g] (46 and 47 µg/L), several other volatile organic compounds [VOCs] and PAHs, and lead (0.016 and 0.025 µg/L) were detected below their respective DOH Tier 1 EALs. Concentrations of TPH-d, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene increased from the previous event in January 2015, with the concentrations of 2-methylnaphthalene increasing to levels above the DOH Tier 1 EAL. There was a large discrepancy between the PAH results in the primary and duplicate samples due to precision issues and it is possible that the PAH concentrations did not significantly increase from the previous event. The concentration of TPH-d detected during the April 2015 event was the highest it has been since its historical high in October 2008 and was similar to the level reached in January 2014.
- **RHMW03** – The only analytes detected in groundwater were TPH-d (100 µg/L), TPH-o (110 µg/L), several PAHs, and lead (0.011 µg/L). The concentrations of TPH-d and TPH-o exceeded their respective DOH Tier 1 EALs, but did not exceed the SSRBL. The TPH-d concentration detected in RHMW03 during this event was equal to the DOH Tier 1 EAL and was the highest concentration detected since October 2010.
- **RHMW05** – The only analytes detected in groundwater were TPH-d (17 µg/L), TPH-o (34 µg/L), benzo[a]anthracene (0.0038 µg/L), phenanthrene (0.0052 µg/L), and lead (0.032 µg/L). The concentrations did not exceed the DOH Tier 1 EALs or the SSRBL.
- **RHMW2254-01** – The only analytes detected in groundwater were TPH-d (14 µg/L), TPH-o (37 µg/L), and lead (0.202 µg/L). The concentrations did not exceed the DOH Tier 1 EALs.

During this quarterly event, the concentrations of TPH-d in RHMW01, RHMW02, and RHMW03; TPH-o in RHMW02 and RHMW03; and 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in RHMW02 exceeded their respective DOH Tier 1 EALs. The concentration of TPH-d in RHMW02 also exceeded the SSRBL. The concentration of TPH-d in each well and the concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in RHMW02 increased from the previous event in January 2015. Groundwater contaminant concentrations in RHMW05, and RHMW2254-01 remained at low concentrations and did not change significantly from the previous event, or were not detected.

Concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in RHMW02 have shown a generally increasing trend since March 2014. During the April 2015 event, the concentration of TPH-d in RHMW02 increased to its highest level since October 2008. All other analytical results were generally consistent with historical data.

Based on the groundwater monitoring results and the reported release at Tank 5 in January 2014, continued groundwater monitoring at the wells inside the RHSF tunnel is recommended.

The next quarterly event is tentatively scheduled for July 2015.

SECTION 1 – INTRODUCTION

This quarterly groundwater monitoring report presents the results of the second quarter 2015 groundwater sampling conducted on April 20 and 21, 2015, at the RHSF, JBPHH. The RHSF is located in Halawa Heights on the Island of Oahu. The purpose of the sampling is to (1) assess the condition of groundwater beneath the RHSF with respect to chemical constituents associated with jet fuel propellant and marine diesel fuel, and (2) to ensure the Navy remains in compliance with DOH UST release response requirements as described in Hawaii Administrative Rules Chapter 11-281 Subchapter 7, *Release Response Action* (DOH, 2013). The DOH Facility ID number for the RHSF is 9-102271. The DOH Release ID numbers are 990051, 010011, 020028, and 140010.

The groundwater sampling was conducted as part of the long-term groundwater and soil vapor monitoring program at the RHSF for NAVSUP FLC Pearl Harbor, under NAVFAC Contract Number N62742-12-D-1853. The sampling was conducted in accordance with the approved WP/SAP prepared by ESI (ESI, 2012).

1.1 SITE DESCRIPTION

The RHSF is located on federal government land (zoned F1- Military and Federal), located in Halawa Heights, approximately 2.5 miles northeast of Pearl Harbor (Figure 1). It is located on a low ridge on the western edge of the Koolau Mountain Range that divides Halawa Valley from Moanalua Valley. The RHSF is bordered on the north by Halawa Correctional Facility and private businesses, on the southwest by the United States of America [U.S.] Coast Guard reservation, on the south by residential neighborhoods, and on the east by Moanalua Valley. A quarry is located less than a quarter mile away to the northwest. The RHSF occupies 144 acres of land and the majority of the site is at an elevation of approximately 200 to 500 feet above mean sea level.

The RHSF contains 18 active and 2 inactive USTs that are operated by NAVSUP FLC Pearl Harbor. Each UST has a capacity of approximately 12.5 million gallons. The RHSF is located approximately 100 feet above the basal aquifer. The USTs contain Jet Fuel Propellant-5 [JP-5], Jet Fuel Propellant-8 [JP-8], and Marine Diesel Fuel [F-76]. The current status of each UST is summarized in Table 1.1.

Four groundwater monitoring wells (wells RHMW01, RHMW02, RHMW03, and RHMW05) and one sampling point at Red Hill Shaft (RHMW2254-01) are located within the RHSF lower access tunnel (Figure 2). Five groundwater monitoring wells (wells HDMW2253-03, OWDFMW01, RHMW04, RHMW06, and RHMW07) are located outside of the RHSF tunnel system. Monitoring data for the five wells located outside the tunnel are included in a separate report.

As noted, monitoring wells RHMW01, RHMW02, RHMW03, and RHMW05 are located inside the underground tunnels. Sampling point RHMW2254-01 is located inside the infiltration gallery

of the Department of the Navy [DON] drinking water supply Well 2254-01. The DON Well 2254-01 is located approximately 2,400 feet downgradient of the USTs and provides potable water to the JBPHH Water System, which serves approximately 65,200 military customers. NAVFAC Public Works Department operates the infiltration gallery and DON Well 2254-01.

TABLE 1.1
Current Status of the USTs
Red Hill Bulk Fuel Storage Facility
April 2015 Quarterly Monitoring Report

Tank Identification	Fuel Type	Status	Capacity
F-1	None	Inactive	12.5 million gallons
F-2	JP-8	Active	12.5 million gallons
F-3	JP-8	Active	12.5 million gallons
F-4	JP-8	Active	12.5 million gallons
F-5	JP-8	Active	12.5 million gallons
F-6	JP-8	Active	12.5 million gallons
F-7	JP-5	Active	12.5 million gallons
F-8	JP-5	Active	12.5 million gallons
F-9	JP-5	Active	12.5 million gallons
F-10	JP-5	Active	12.5 million gallons
F-11	JP-5	Active	12.5 million gallons
F-12	JP-5	Active	12.5 million gallons
F-13	F-76	Active	12.5 million gallons
F-14	F-76	Active	12.5 million gallons
F-15	F-76	Active	12.5 million gallons
F-16	F-76	Active	12.5 million gallons
F-17	JP-5	Active	12.5 million gallons
F-18	JP-5	Active	12.5 million gallons
F-19	None	Inactive	12.5 million gallons
F-20	JP-5	Active	12.5 million gallons

F-76 Marine Diesel Fuel

JP-5 Jet Fuel Propellant-5

JP-8 Jet Fuel Propellant-8

1.2 PHYSICAL SETTING

Climatological conditions in the area of the RHSF consist of warm to moderate temperatures and low to moderate rainfall. The RHSF is leeward of the prevailing northeasterly trade winds. The average annual precipitation is approximately 40 inches, which occurs mainly between November and April (State of Hawaii Department of Land and Natural Resources [DLNR], 1986). Annual pan evaporation is approximately 75 inches (DLNR, 1985). Average temperatures range from the low 60's to high 80's (degrees Fahrenheit) (Atlas of Hawaii, 1983).

Oahu consists of the eroded remnants of two shield volcanoes, Waianae and Koolau. The RHSF is located on the southwest flank of the Koolau volcanic shield. Lavas erupted during the shield-building phase of the volcano belong to the *Koolau Volcanic Series* (Stearns and Vaksvik, 1935). Following formation of the Koolau shield, a long period of volcanic quiescence occurred, during which the shield was deeply eroded. Following this erosional period, eruptive activity

resumed. Lavas and pyroclastic material erupted during this period belong to the *Honolulu Volcanic Series* (Stearns and Vaksvik, 1935).

In the immediate area of the RHSF, Koolau Volcanic Series lavas dominate, although there are consolidated and unconsolidated non-calcareous deposits in the vicinity that consist of alluvium generated during erosion of the Koolau volcanic shield. South-southwest of the RHSF, and in isolated exposures to the west, are pyroclastic deposits formed during eruptions from three Honolulu Volcanic Series vents, Salt Lake, Aliamanu, and Makalapa (Stearns and Vaksvik, 1935). Based on established geology and records of wells drilled at the RHSF (Stearns and Vaksvik, 1938), the RHSF is underlain by Koolau Volcanic Series basalts. The area of the RHSF is classified as *Rock Land*, where 25-90% of the land surface is covered by exposed rock and there are only shallow soils (Foote, et al., 1972).

Groundwater in Hawaii exists in two principal aquifer types. The first and most important type, in terms of drinking water resources, is the basal aquifer. The basal aquifer exists as a lens of fresh water floating on and displacing seawater within the pore spaces, fractures, and voids of the basalt that forms the underlying mass of each Hawaiian island. In parts of Oahu, groundwater in the basal aquifer is confined by the overlying caprock and is under pressure. Waters that flow freely to the surface from wells that tap the basal aquifer are referred to as *artesian*.

The second type of aquifer is the caprock aquifer, which consists of various kinds of unconfined and semi-confined groundwater. Commonly, the caprock consists of a thick sequence of nearly impermeable clays, coral, and basalt that separates the caprock aquifer from the basal aquifer. The impermeable nature of these materials and the artesian nature of the basal aquifer severely restrict the downward migration of groundwater from the upper caprock aquifer. However, in the area of the RHSF, there is no discernible caprock.

Groundwater in the area of the RHSF is part of the *Waimalu Aquifer System* of the *Pearl Harbor Aquifer Sector*. The aquifer is classified as a basal, unconfined, flank-type; and is currently used as a drinking water source. The aquifer is considered fresh, with less than 250 milligrams per liter of chloride, and is considered an irreplaceable resource with a high vulnerability to contamination (Mink and Lau, 1990).

The nearest drinking water supply well is DON Well 2254-01, located in the infiltration gallery within the RHSF lower tunnel. The DON Well 2254-01 is located approximately 2,400 feet hydraulically and topographically downgradient of the USTs (Figure 2).

The nearest body of surface water is Halawa Stream, an ephemeral stream that is present along the north side of the RHSF. Except for the portion to the east of the Halawa Correctional Facility, the stream is contained by a concrete culvert. The stream is usually dry, but flows after periods of significant rainfall.

Wells RHMW01, RHMW02, RHMW03, and RHMW05 are all located greater than 150 meters of any portion of Halawa Stream. Sampling point RHMW2254-01 is located within 150 meters of a portion of Halawa Stream. The distance of each well and sample point to Halawa Stream is presented in Table 1.2

TABLE 1.2
Distance of Wells/Sample Point to Halawa Stream
Red Hill Bulk Fuel Storage Facility
April 2015 Quarterly Monitoring Report

Well/Sample Point	Distance to Halawa Stream (meters)
RHMW2254-01	84.67
RHMW01	231.77
RHMW02	298.61
RHMW03	270.53
RHMW05	225.14

1.3 BACKGROUND

The RHSF was constructed by the U.S. Government in the early 1940s. Twenty USTs and a series of tunnels were constructed. The USTs were constructed of steel, and in the past have stored DON special fuel oil, DON distillate, aviation gasoline, and motor gasoline (Environet, 2010). The tanks currently contain JP-5, JP-8, and F-76. The fueling system is a self-contained underground unit that was installed into native rock comprised primarily of basalt with some interbedded tuffs and breccias (Environet, 2010). Each UST measures approximately 250 feet in height and 100 feet in diameter. The upper domes of the tanks lie at a depth varying between 100 feet and 200 feet below ground surface [bgs].

In 1998, Earth Tech conducted a Phase II Remedial Investigation/Feasibility Study for the Oily Waste Disposal Facility located within the RHSF. The study included the installation of well OWDFMW01 (which was originally MW08) (Earth Tech, 1999).

In February 2001, the DON installed groundwater monitoring well RHMW01 to monitor for contamination in the basal aquifer beneath the RHSF. Well RHMW01 was installed approximately 100 feet below grade within the lower access tunnel. The depth to water was measured at 86 feet below the tunnel floor at the time of the well completion. In February 2001, a groundwater sample was collected from the well. TPH and total lead were detected in the sample. Total lead was detected at a concentration above the DOH Tier 1 groundwater action level of 5.6 µg/L (The Environmental Company, Inc. [TEC], 2009; DOH, 2000).

In 2005, the RHSF groundwater monitoring program was initiated. It involved routine groundwater sampling of well RHMW01 and sampling point RHMW2254-01. Samples were collected in February, June, September, and December of 2005. Lead was detected at concentrations above the DOH Tier 1 action level of 5.6 µg/L in samples collected in February and June. The samples collected in February and June were not filtered prior to analysis, whereas the samples collected in September and December were filtered prior to analysis.

Since the samples collected in February and June were not filtered prior to analysis, the lead results were not considered appropriate for a risk assessment (TEC, 2008a).

Between June and September 2005, TEC installed three additional groundwater monitoring wells (wells RHMW02, RHMW03, and RHMW04) (TEC, 2008a). Well RHMW04 was installed hydraulically upgradient of the USTs to provide background geochemistry information for water moving through the basal aquifer beneath the RHSF. Wells RHMW02 and RHMW03 were installed approximately 125 feet below grade within the RHSF lower tunnel and well RHMW04 was installed to a depth of approximately 300 feet bgs outside of the RHSF tunnels. In September 2005, groundwater samples were collected from the three newly installed groundwater monitoring wells (wells RHMW02, RHMW03, and RHMW04) along with the existing well RHMW01 and sampling point RHMW2254-01. The contaminants of potential concern [COPCs] with concentrations that exceeded current DOH EALs are summarized below.

- **RHMW01** – TPH-d was detected at concentrations above the DOH EALs.
- **RHMW02** – TPH-g, TPH-d, naphthalene, trichloroethylene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs.
- **RHMW03** – TPH-d was detected at concentrations above the DOH EALs.

In 2006, TEC installed dedicated sampling pumps in the four wells (wells RHMW01, RHMW02, RHMW03, and RHMW04) and one sampling point (RHMW2254-01). In July and December, groundwater samples were collected from the four wells and the sampling point. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHMW01** – TPH-d and naphthalene were detected at concentrations above their respective DOH EALs.
- **RHMW02** – TPH-g, TPH-d, and naphthalene were detected at concentrations above their respective DOH EALs.
- **RHMW03** – TPH-d was detected at concentrations above the DOH EALs.

In 2007, SSRBLs were established for TPH (4,500 µg/L) and benzene (750 µg/L) based on the solubility in water of JP-5 and JP-8 (TEC, 2007). Groundwater samples were collected from wells RHMW01, RHMW02, and RHMW03, and sampling point RHMW2254-01 in March, June, and September. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHMW02** – TPH-g, TPH-d, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

- **RHWMW03** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.

In 2008, groundwater samples were collected from wells RHWM01, RHWM02, and RHMW03, and sampling point RHMW2254-01. Samples were collected in January, April, July, and October. The COPCs with concentrations that exceeded current DOH EALs are summarized below. In addition, a groundwater protection plan (TEC, 2008a) was prepared.

- **RHWMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHWMW02** – TPH-d, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations detected in October 2008 were also above the SSRBL.
- **RHWMW03** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHWMW2254-01** - Preliminary analytical results from the January 2008 sampling event indicated TPH-d was detected at an estimated concentration of 102 µg/L and above the DOH EAL. Upon review of the analytical data, the result was reported in the March 2008 *Quarterly Groundwater Monitoring Report* (TEC, 2008b) as rejected due to laboratory contamination observed in the associated laboratory blank. Well RHMW2254-01 was resampled, and split samples were sent to two laboratories (SGS Environmental Services in Anchorage, Alaska and Accutest Laboratories in Orlando, Florida) for analysis. Analytical results from both laboratories indicated TPH-d was not detected above the respective method detection limits of the laboratories, which were equal or less than the DOH EAL. The Quarterly Groundwater Monitoring Report of March 2008 is included as Appendix A.

Although rejected in the March 2008 *Quarterly Groundwater Monitoring Report*, the January 15 2008 TPH-d concentration has previously been reported in project Cumulative Groundwater Results tables (Appendix B) as an estimated 102 µg/L, as reported by the analytical laboratory. With this report, the January 15 2008 result was re-validated based on DON Procedure II-H, *Standard and Full Data Validation for Extractable Total Petroleum Hydrocarbons by SW-846 8015B*, (DON, 2007) and changed to not detected with a Limit of Detection [LOD] of 102 µg/L. The table of cumulative historical groundwater results included as Appendix B has been updated to reflect the correct reported result for January 2008. In addition, the analytical results for the two split samples collected in February 2008 have been added to the table. The DON Procedure II-H, *Standard and Full Data Validation for Extractable Total Petroleum Hydrocarbons by SW-846 8015B*, from the 2007 NAVFAC Pacific Project Procedures Manual (DON, 2007) is included as Appendix C.

In April 2009, groundwater monitoring well RHMW05 was installed downgradient of the USTs, within the lower access tunnel between RHMW01 and RHMW2254-01. It was installed to identify the extent of contamination hydraulically downgradient of the USTs. Well RHMW05 was

added to the quarterly groundwater sampling program. In 2009, quarterly groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. Samples were collected in February, May, July, and October. The COPCs with concentrations that exceeded current DOH EALs are summarized below. In addition, the Groundwater Protection Plan was revised to include well RHMW05.

- **RHMW01** – TPH-d and 1-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.
- **RHMW02** – TPH-d, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.
- **RHMW03** – TPH-d was detected at a concentration above the DOH EALs, but below the SSRBL.
- **RHMW05** – TPH-d was detected at a concentration above the DOH EALs, but below the SSRBL.

In 2010, groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. Samples were collected in January, April, July, and October. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHMW02** – TPH-g, TPH-d, naphthalene, and 1-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.
- **RHMW03** – TPH-d was detected at a concentration above the DOH EALs, but below the SSRBL.
- **RHMW05** – TPH-d was detected at a concentration above the DOH EALs, but below the SSRBL.

In 2011, quarterly groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. Samples were collected in January, April, July, and October. In a Fall 2011 update, the DOH EALs were revised. The drinking water toxicity EAL for TPH-d decreased from 210 to 190 µg/L (DOH, 2011). The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.

- **RHWMW02** – TPH-d, naphthalene, indeno[1,2,3-cd]pyrene, and 1-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

In 2012, quarterly groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. Samples were collected in February, April, July, and November. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHWMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHWMW02** – TPH-d, TPH-g, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

In 2013, quarterly groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. Samples were collected in January, April, July, and October. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHWMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHWMW02** – TPH-d, TPH-g, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

In 2014, quarterly groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. Samples were collected in January, April, July, and October. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHWMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHWMW02** – TPH-d, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

Between January and June 2014, additional groundwater sampling was conducted at wells RHMW01, RHMW02, RHMW05, and sampling point RHMW2254-01 in response to a reported release from Tank 5. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHWMW01** – TPH-d was detected at concentrations above the DOH EALs, but below the SSRBL.
- **RHWMW02** – TPH-d, 1-methylnaphthalene, and naphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

Between August and October 2014, wells RHMW06 and RHMW07 were installed outside the RHSF tunnel system in order to develop a more robust groundwater monitoring network at the site (Battelle, 2015). The wells were sampled in October 2014 and January 2015, and subsequently included in the quarterly sampling conducted as part of the long-term groundwater and soil vapor monitoring program at the RHSF. Monitoring data for these wells are included in a separate report.

In January 2015, quarterly groundwater samples were collected from wells RHWM01, RHWM02, RHMW03, and RHMW05, and sampling point RHMW2254-01. The COPCs with concentrations that exceeded current DOH EALs are summarized below.

- **RHWMW02** – TPH-d, naphthalene, and 1-methylnaphthalene were detected at concentrations above their respective DOH EALs. The TPH-d concentrations were below the SSRBL.

1.3.1 Previous Reports

The following groundwater monitoring reports for wells located inside the underground tunnels and infiltration gallery were previously submitted to DOH:

1. Groundwater Sampling Report, First Quarter 2005 (submitted April 2005).
2. Groundwater Sampling Report, Second Quarter 2005 (submitted August 2005).
3. Groundwater Sampling Report, Third Quarter 2005 (submitted November 2005).
4. Groundwater Sampling Report, Fourth Quarter 2005 (submitted February 2006).
5. Groundwater Monitoring Results, July 2006 (submitted September 2006).
6. Groundwater Monitoring Results, December 2006 (submitted January 2007).
7. Groundwater Monitoring Results, March 2007 (submitted May 2007).
8. Groundwater Monitoring Results, June 2007 (submitted August 2007).
9. Groundwater Monitoring Results, September 2007 (submitted October 2007).
10. Groundwater Monitoring Report, January 2008 (submitted March 2008).
11. Groundwater Monitoring Report, April 2008 (submitted May 2008).
12. Groundwater Monitoring Report, July 2008 (submitted October 2008).
13. Groundwater Monitoring Report, October and December 2008 (submitted February 2009).
14. Groundwater Monitoring Report, February 2009 (submitted May 2009).

15. Groundwater Monitoring Report, May 2009 (submitted July 2009).
16. Groundwater Monitoring Report, July 2009 (submitted September 2009).
17. Groundwater Monitoring Report, October 2009 (submitted December 2009).
18. Groundwater Monitoring Report, January, February, and March 2010 (submitted April 2010).
19. Groundwater Monitoring Report, April 2010 (submitted May 2010).
20. Groundwater Monitoring Report, July 2010 (submitted August 2010).
21. Groundwater Monitoring Report, October 2010 (submitted December 2010).
22. Groundwater Monitoring Report, January 2011 (submitted March 2011).
23. Groundwater Monitoring Report, April 2011 (submitted June 2011).
24. Groundwater Monitoring Report, July 2011 (submitted September 2011).
25. Groundwater Monitoring Report, October 2011 (submitted December 2011).
26. Groundwater Monitoring Report, January-February 2012 (submitted March 2012).
27. Groundwater Monitoring Report, April 2012 (Submitted July 2012).
28. Groundwater Monitoring Report, October 2012 (Submitted January 2013).
29. Groundwater Monitoring Report, January 2013 (Submitted April 2013).
30. Groundwater Monitoring Report, April 2013 (Submitted July 2013).
31. Groundwater Monitoring Report, July 2013 (Submitted September 2013).
32. Groundwater Monitoring Report, October 2013 (Submitted January 2014).
33. Groundwater Sampling Report for Additional Sampling, January 2014 (submitted January 2014).
34. Groundwater Monitoring Report, January 2014 (Submitted April 2014).
35. Groundwater Sampling Report for Tank 5 Release Response on March 5 and 6, 2014 (submitted March 2014).
36. Groundwater Sampling Report for Tank 5 Release Response on March 10, 2014 (submitted March 2014).
37. Groundwater Sampling Report for Tank 5 Release Response on March 25 and 26, 2014 (submitted April 2014).
38. Groundwater Sampling Report for Tank 5 Release Response on April 7, 2014 (submitted April 2014).
39. Groundwater Monitoring Report, April 2014 (Submitted June 2014).
40. Groundwater Sampling Report for Tank 5 Release Response on May 27 and 28, 2014 (submitted June 2014).

41. Groundwater Sampling Report for Tank 5 Release Response on June 23 and 24, 2014 (submitted July 2014).
42. Groundwater Monitoring Report, July 2014 (Submitted September 2014).
43. Groundwater Monitoring Report, October 2014 (Submitted January 2015).
44. Groundwater Monitoring Report, January 2015 (Submitted March 2015).

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SECTION 2 – GROUNDWATER SAMPLING

On April 20 and 21, 2015, ESI personnel collected groundwater samples from four monitoring wells at the RHSF (wells RHMW01, RHMW02, RHMW03, and RHMW05) and one sampling point at Red Hill Shaft (RHMW2254-01). The samples were collected in accordance with the 2012 WP/SAP. The WP/SAP is consistent with DOH UST release response requirements (DOH, 2000); DON Procedure I-C-3, *Monitoring Well Sampling* (DON, 2007); and the RHSF Final Groundwater Protection Plan (TEC, 2008). Prior to purging and sampling, the depth to groundwater and the depth to the bottoms of the wells were measured using a Geotech oil/water interface probe. No measurable product, sheen, or petroleum hydrocarbon odor was detected in any of the wells.

2.1 GROUNDWATER SAMPLING

Prior to collecting groundwater samples, the monitoring wells were purged of standing water in the well casings. Each well contains a dedicated bladder pump which was used to purge the well and to collect samples. To operate the pump, a portable air compressor with an in-line filter was connected to a QED MP50 MicroPurge® Basics Controller box, which was then connected to the pump. The compressor was turned on to power the pump and the controller was used to adjust the pumping rate to less than one liter of water per minute.

Water quality parameters were monitored on a periodic basis during well purging. The water quality parameters that were measured included hydrogen activity [pH], temperature, conductivity, dissolved oxygen, and oxidation reduction potential. The water quality parameters were evaluated to assess whether the natural characteristics of the aquifer formation water were present within the monitoring wells before collecting the samples. At least four readings were collected during the purging process. Purging was considered complete when at least three consecutive water quality measurements stabilized within approximately 10%. The readings were recorded on groundwater monitoring logs. The groundwater monitoring logs are included in Appendix D. In addition, field notes were taken to document the sampling event. The field notes are included in Appendix E.

When the water quality parameters stabilized, groundwater samples were collected from the wells using the bladder pumps. The groundwater samples were collected no more than two hours after purging was completed to decrease groundwater interaction with the monitoring well casing and atmosphere. Prior to collecting the sample, the water level in the monitoring wells was measured and recorded to ensure that excessive drawn down had not occurred. The groundwater samples were collected at flow rates of approximately 0.18 to 0.5 liters per minute. Samples collected for dissolved lead analysis were filtered in the field using new, 0.45-micron filters.

All samples were labeled and logged on the Sample Inventory Log, placed in Ziploc™ bags and sealed, custody sealed, sealed with tape, placed in a cooler with wet ice, and logged onto the Chain-of-Custody form. The samples were labeled and logged in accordance with DON

Procedure III-E, *Record Keeping, Sample Labeling, and Chain-of-Custody Procedures* (DON, 2007). All samples were shipped under Chain-of-Custody to the analytical laboratory and analyzed for the COPCs as described in Section 2.2.

2.2 ANALYTICAL RESULTS

The samples were analyzed for TPH-g, TPH-d, and TPH-o using U.S. Environmental Protection Agency [EPA] Method 8015C; VOCs using EPA Methods 8260C, 8260-SIM, and 8011; PAHs using EPA Method 8270D SIM; dissolved lead using EPA Method 6020; and total lead using EPA Method 200.8. The sample collected from sampling point RHMW2254-01 was analyzed for total lead (unfiltered) as the sampling point is a drinking water supply infiltration shaft.

This is the first time since 2012 that the samples were analyzed for TPH-o. Concentrations of TPH-o were not detected in samples analyzed in 2011 and 2012, but the detection limits were above the DOH EALs. Analysis for TPH-o was added during the second quarter 2015 event to evaluate current TPH-o conditions at the site.

Previous analysis of 1,2-dibromo-3-chloropropane, 1,2-dibromoethane, 1,2-dichloroethane, bromodichloromethane, dibromochloromethane, 1,1,2,2-tetrachloroethane by EPA Method 8260 resulted in non-detect results but with detection limits above the DOH EALs. Therefore, the samples collected during the second quarter 2015 event were analyzed for 1,2-dibromo-3-chloropropane and 1,2-dibromoethane by EPA Method 8011, and for 1,2-dichloroethane, bromodichloromethane, dibromochloromethane, and 1,1,2,2-tetrachloroethane by EPA Method 8260-SIM in order to achieve detection limits that are below the DOH EALs. A copy of the laboratory report is included as Appendix F.

Analytical results were compared to DOH Tier 1 EALs. Previously, results were only compared to EALs for gross contamination and drinking water toxicity; however, beginning with this report, the DOH Final Groundwater Tier 1 EALs, which are the lowest concentration of aquatic habitat goals, gross contamination action levels, and drinking water toxicity action levels, will be used. Additionally, the analytical results were compared to DOH Tier 1 EALs specific to the sample locations distance to the nearest surface water, whether greater or less than 150 meters. Wells RHMW01, RHMW02, RHMW03, and RHMW05 are each more than 150 meters from the nearest surface water (Halawa Stream). Sample point RHMW2254-01 is located within 150 meters of the nearest surface water (Halawa Stream). Analytical results for wells RHMW01, RHMW02, RHMW03, and RHMW05 were also compared to the SSRBLs for TPH (4,500 µg/L) and benzene (750 µg/L), established in the RHSF Final Groundwater Protection Plan (TEC, 2008a). The results of the second quarter groundwater sampling event are summarized in Table 2.1 and described below. For ease of reading, only analytical results for chemicals that have been detected since 2010 are presented in Table 2.1. A description of laboratory data qualifiers, definitions of the terms Method Detection Limit [MDL], LOD, and Limit of Quantitation [LOQ], and basic concepts of those terms are presented as Appendix G.

- **RHMW01** – The only analytes detected in groundwater were TPH-d (170 µg/L), TPH-o (23 µg/L), several PAHs, and lead (0.624 µg/L). The concentration of TPH-d exceeded the DOH Tier 1 EAL, but did not exceed the SSRBL.
- **RHMW02** – Concentrations of TPH-d (5,200 and 5,400 µg/L), TPH-o (360 µg/L in both primary and duplicate samples), 1-methylnaphthalene (31 and 68 µg/L), 2-methylnaphthalene (15 and 37 µg/L), and naphthalene (39 and 140 µg/L) were detected in both the primary and duplicate samples and exceeded their respective DOH Tier 1 EALs. The concentrations of TPH-d also exceeded the SSRBL of 4,500 µg/L. Concentrations of TPH-g (46 and 47 µg/L), several other VOCs and PAHs, and lead (0.016 and 0.025 µg/L) were detected below their respective DOH Tier 1 EALs.
- **RHMW03** – The only analytes detected in groundwater were TPH-d (100 µg/L), TPH-o (110 µg/L), several PAHs, and lead (0.011 µg/L). The concentrations of TPH-d and TPH-o exceeded their respective DOH Tier 1 EALs, but did not exceed the SSRBL.
- **RHMW05** – The only analytes detected were TPH-d (17 µg/L), TPH-o (34 µg/L), benzo[a]anthracene (0.0038 µg/L), phenanthrene (0.0052 µg/L), and lead (0.032 µg/L). The concentrations did not exceed the DOH Tier 1 EALs or the SSRBL.
- **RHMW2254-01** – The only analytes detected in groundwater were TPH-d (14 µg/L), TPH-o (37 µg/L), and lead (0.202 µg/L). The concentrations did not exceed the DOH Tier 1 EALs.

2.3 GROUNDWATER CONTAMINANT TRENDS

The historical groundwater contaminant concentration trends for COPCs that exceeded the DOH EALs or SSRBLs are illustrated in Appendix H. A table of cumulative historical groundwater results is included as Appendix B. A summary of groundwater contaminant trends is provided below.

- **RHMW01** – The COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW01. TPH-d has historically been detected at concentrations above the DOH Tier 1 EAL. The TPH-d concentration detected in RHMW01 during this event (170 µg/L) was the highest since January 2014; however, TPH-d concentrations have shown an overall decreasing trend from a high of 1,500 µg/L in February 2005.
- **RHMW02** – The COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW02. TPH-g, TPH-d, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene have historically been detected at concentrations above the DOH Tier 1 EALs. During the April 2015 event, concentrations of TPH-d, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene increased from the previous event in January 2015, with the concentrations of 2-methylnaphthalene increasing to levels above the DOH Tier 1 EALs. The concentration of TPH-d detected during the April 2015 was the highest it has been since its historical high in October 2008. The concentrations of TPH-g remained below the DOH Tier 1 EALs and were comparable to the concentrations detected during the previous event. Trichloroethylene was detected once in RHMW02 in September 2005 in the primary sample at a concentration above the DOH EAL for drinking

water toxicity; however, trichloroethylene was not detected in the duplicate sample, and this may have been an anomalous result.

- **RHMW03** – COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW03. TPH-d has historically been detected at concentrations above the DOH Tier 1 EALs. The TPH-d concentration detected in RHMW03 during this event (100 µg/L) was equal to the DOH Tier 1 EAL and was the highest concentration detected since October 2010.
- **RHMW05** – COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW05. TPH-d has historically been detected in RHMW05 at concentrations above the DOH Tier 1 EAL; however, it has not been detected at concentrations above the DOH Tier 1 EAL since January 2010.
- **RHMW2254-01** – COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW2254-01. Although the method reporting limits for TPH-d were above the DOH Tier 1 EAL in several results prior to August 2010, TPH-d has not been detected in RHMW2254-01 at a concentration above the DOH Tier 1 EAL.
The TPH-d concentration for the January 15, 2008 sample from RHMW2254-01 was previously reported in the project Cumulative Groundwater Results table (Appendix E) as an estimated 102 µg/L, as reported by the analytical laboratory. The sample result was reported as rejected in the March 2008 *Quarterly Groundwater Monitoring Report* (TEC, 2008b) based on the presence of contamination in the laboratory method blank sample. With this report, the January 15 2008 result was re-validated based on DON Procedure II-H, *Standard and Full Data Validation for Extractable Total Petroleum Hydrocarbons by SW-846 8015B* (DON, 2007), and changed to not detected with an LOD of 102 µg/L.

2.4 WASTE DISPOSAL

The purged groundwater and decontamination water generated during sampling of the inside tunnel wells were placed in a 55-gallon drum along with the purged water and decontamination water from the outside tunnel wells. The drum was stored onsite at ADIT 3. On June 26, 2015, the drum of water was picked up by Pacific Commercial Services, LLC and disposed at Unitek Solvent Services, Inc. The waste disposal manifest is included in Appendix I.

TABLE 2.1
Analytical Results for Groundwater Sampling (April 20 and 21, 2015)
Red Hill Bulk Fuel Storage Facility
April 2015 Quarterly Monitoring Report

Method	Chemical	DOH EAL	RHMW2254-01 (ES134) <150 meters from surface water					RHWM01 (ES130) >150 meters from surface water					RHMW02 (ES131) >150 meters from surface water					RHWM03 (ES133) >150 meters from surface water					RHWM05 (ES135) >150 meters from surface water				
			Results	Q	LOQ	LOD	DL	Results	Q	LOQ	LOD	DL	Results	Q	LOQ	LOD	DL	Results	Q	LOQ	LOD	DL	Results	Q	LOQ	LOD	DL
EPA 8015C	TPH-g	100	N.D.	U	50	25	13	N.D.	U	50	25	13	46	J	50	25	13	N.D.	U	50	25	13	N.D.	U	50	25	13
	TPH-d	100	14	JB	50	20	11	170	Y	50	20	11	5,200	Y	49	20	11	100	YB	48	20	11	17	JB	53	21	12
	TPH-o	100	37	JB	100	50	19	23	JB	100	50	19	360	L	97	50	19	110	LB	95	50	19	34	JB	110	53	20
EPA 8270D SIM	Acenaphthene	20	N.D.	U	0.020	0.0050	0.0044	0.0094	J	0.020	0.0050	0.0044	0.24		0.020	0.0050	0.0044	N.D.	U	0.021	0.0053	0.0046	N.D.	U	0.020	0.0050	0.0044
	Acenaphthylene	30 / 240	N.D.	U	0.020	0.0050	0.0034	0.0041	J	0.020	0.0050	0.0034	0.10	X	0.020	0.0050	0.0034	N.D.	U	0.021	0.0053	0.0036	N.D.	U	0.020	0.0050	0.0034
	Benzo[a]anthracene	0.027 / 0.092	N.D.	U	0.020	0.0050	0.0026	0.0026	JB	0.020	0.0050	0.0026	0.0047	JB	0.020	0.0050	0.0026	0.0037	JB	0.021	0.0053	0.0028	0.0038	JB	0.020	0.0050	0.0026
	Fluoranthene	8 / 130	N.D.	U	0.020	0.020	0.0100	N.D.	U	0.020	0.020	0.0100	N.D.	U	0.020	0.020	0.0100	N.D.	U	0.021	0.021	0.0110	N.D.	U	0.020	0.020	0.0100
	Fluorene	3.9 / 240	N.D.	U	0.020	0.0050	0.0038	0.0096	J	0.020	0.0050	0.0038	0.14		0.020	0.0050	0.0038	N.D.	U	0.021	0.0053	0.0040	N.D.	U	0.020	0.0050	0.0038
	1-Methylnaphthalene	2.1 / 4.7	N.D.	UJ	0.020	0.0050	0.0035	0.014	J	0.020	0.0050	0.0035	31	JD	0.20	0.050	0.035	0.015	J	0.021	0.0053	0.0037	N.D.	UJ	0.020	0.0050	0.0035
	2-Methylnaphthalene	2.1 / 10	N.D.	UJ	0.020	0.0050	0.0023	0.0093	J	0.020	0.0050	0.0023	15	JD	0.20	0.050	0.023	0.0083	J	0.021	0.0053	0.0024	N.D.	UJ	0.020	0.0050	0.0023
	Naphthalene	17	N.D.	UJ	0.020	0.0050	0.0038	0.056	J	0.020	0.0050	0.0038	39	JD	0.20	0.050	0.038	0.035	J	0.021	0.0053	0.0040	N.D.	UJ	0.020	0.0050	0.0038
	Phenanthrene	4.6 / 240	N.D.	U	0.020	0.0050	0.0050	0.011	J	0.020	0.0050	0.0050	N.D.	U	0.020	0.0050	0.0050	0.0058	J	0.021	0.0053	0.0053	0.0052	J	0.020	0.0050	0.0050
	Pyrene	2 / 68	N.D.	U	0.020	0.010	0.0053	N.D.	U	0.020	0.010	0.0053	0.0058	JX	0.020	0.010	0.0053	N.D.	U	0.021	0.011	0.0056	N.D.	U	0.020	0.010	0.0053
	1,1,2,2-Tetrachloroethane	0.067	N.D.	U	0.020	0.015	0.0087	N.D.	U	0.020	0.015	0.0087	0.059		0.020	0.015	0.0087	N.D.	U	0.020	0.015	0.0087	N.D.	U	0.020	0.015	0.0087
	1,2,3-Trichloropropane	0.6	N.D.	U	0.50	0.50	0.20	N.D.	U	0.50	0.50	0.20	N.D.	U	0.50	0.50	0.20	N.D.	U	0.50	0.50	0.20	N.D.	U	0.50	0.50	0.20
EPA 8260C/ 8260-SIM/ 8011	1,2-Dibromo-3- chloropropane	0.04	N.D.	U	0.0096	0.0040	0.0036	N.D.	U	0.0096	0.0040	0.0036	N.D.	U	0.0097	0.0040	0.0036	N.D.	U	0.0096	0.0040	0.0036	N.D.	U	0.0096	0.0040	0.0036
	1,2-Dibromoethane	0.04	N.D.	U	0.0096	0.0040	0.0030	N.D.	U	0.0096	0.0040	0.0030	N.D.	U	0.0097	0.0040	0.0030	N.D.	U	0.0096	0.0040	0.0030	N.D.	U	0.0096	0.0040	0.0030
	1,2-Dichloroethane	0.15	N.D.	U	0.020	0.015	0.0058	N.D.	U	0.020	0.015	0.0058	N.D.	U	0.020	0.015	0.0058	N.D.	U	0.020	0.015	0.0058	N.D.	U	0.020	0.015	0.0058
	Acetone	1,500	N.D.	U	20	10	3.3	N.D.	U	20	10	3.3	N.D.	U	20	10	3.3	N.D.	U	20	10	3.3	N.D.	U	20	10	3.3
	Benzene	5	N.D.	U	0.50	0.10	0.062	N.D.	U	0.50	0.10	0.062	0.090	J	0.50	0.10	0.062	N.D.	U	0.50	0.10	0.062	N.D.	U	0.50	0.10	0.062
	Chloroform	70	N.D.	U	0.50	0.20	0.072	N.D.	U	0.50	0.20	0.072	N.D.	U	0.50	0.20	0.072	N.D.	U	0.50	0.20	0.072	N.D.	U	0.50	0.20	0.072
	Ethylbenzene	30	N.D.	U	0.50	0.10	0.05	N.D.	U	0.50	0.10	0.05	0.18	J	0.50	0.10	0.05	N.D.	U	0.50	0.10	0.05	N.D.	U	0.50	0.10	0.05
	Methylene chloride	4.8	N.D.	U	2.00	0.20	0.10	N.D.	U	2.00	0.20	0.10	N.D.	UJ	2.00	0.20	0.10	N.D.	U	2.00	0.20	0.10	N.D.	U	2.00	0.20	0.10
	Toluene	40	N.D.	U	0.50	0.10	0.054	N.D.	U	0.50	0.10	0.054	N.D.	U	0.50	0.10	0.054	N.D.	U	0.50	0.10	0.054	N.D.	U	0.50	0.10	0.054
	Trichloroethylene	5	N.D.	U	0.50	0.10	0.10	N.D.	U	0.50	0.10	0.10	N.D.	U	0.50	0.10	0.10	N.D.	U	0.50	0.10	0.10	N.D.	U	0.50	0.10	0.10
	Xylenes	20	N.D.	U	1.00	0.20	0.18	N.D.	U	1.00	0.20	0.18	0.26	J	1.00	0.20	0.18	N.D.	U	1.00	0.20	0.18	N.D.	U	1.00	0.20	0.18
EPA 6020	Dissolved Lead	5.6 / 15	-	-	-	-	-	0.624		0.02	0.01	0.005	0.016	J	0.02	0.01	0.005	0.011	J	0.02	0.01	0.005	0.032		0.02	0.01	0.005
EPA 200.8	Total Lead	5.6 / 15	0.202		0.020	0.010	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Only chemicals that have been detected since 2010 are included in this table. All other analytical results are included in the cumulative groundwater results table. The data are in micrograms per liter (µg/L). Shaded values exceeded the DOH Tier 1 EALs.

- Not Analyzed

DL Detection Limit or Method Detection Limit (MDL)

DOH EAL DOH Tier 1 Environmental Action Levels for groundwater where groundwater is a current drinking water source (DOH, Fall 2011). Where two values are listed, the first is for sites less than (<) 150 meters from surface water and the second is for sites greater than (>) 150 meters from surface water.

J Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.

L, Y, The chromatographic pattern was inconsistent with the profile of the reference fuel standard.

D The reported result is from a dilution.

EPA Environmental Protection Agency

B Analyte was present in the associated method blank.

LOD Limit of Detection

LOQ Limit of Quantitation

N.D. Not Detected

Q Qualifiers

TPH-g / TPH-d / TPH-o Total Petroleum Hydrocarbons as gasoline, diesel fuel, and oil

X Possible high bias due to matrix interference.

U Undetected at DL and is reported as less than the LOD.

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SECTION 3 – DATA QUALITY ASSESSMENT

A data quality assessment, which consists of a review of the overall groundwater sample collection and analysis process, was performed in order to determine whether the analytical data generated met the quality objectives for the project. The data quality assessment was performed in accordance with the approved WP/SAP (ESI, 2012). The field quality control (QC) program consisted of standardized sample collection and management procedures, and the collection of field duplicate samples, matrix spike samples, and trip blank samples. The laboratory quality assurance program consisted of the use of standard analytical methods and the preparation and analyses of Matrix Spike [MS]/Matrix Spike Duplicate [MSD] samples, surrogate spikes, blanks, and Laboratory Control Samples [LCSs]/Laboratory Control Sample Duplicates [LCSDs].

3.1 DATA VALIDATION AND ASSESSMENT

The objective of data validation is to provide data of known quality for project decisions. Data quality is judged in terms of Precision, Accuracy, Representativeness, Completeness, Comparability, and Sensitivity [PARCCS]. A number of factors may affect the quality of data, including: sample collection methods, sample analysis methods, and adherence to established procedures for sample collection, preservation, management, shipment, and analysis.

Precision

Precision is defined as the reproducibility of replicate measurements. Precision is evaluated by Relative Percentage Difference [RPD] of field duplicates, LCS/LCSD, and MS/MSD results. Field duplicate and MS/MSD samples were collected at a rate of approximately 10% of primary samples. Field duplicates were sent to the laboratory along with the primary samples.

The RPDs of detected analytes for the primary and field duplicate samples (ES131 and ES132) are provided in Table 3.1. An RPD of less than 50% for duplicate pairs is required by the DON Project Procedures Manual to be considered acceptable (DON, 2007). Duplicate RPDs for acenaphthene, acenaphthylene, fluorene, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene exceeded the acceptable maximum. An RPD of 200% was assigned to pyrene and methylene chloride results, to indicate that the analyte was detected in one replicate but not in the replicate pair. Because the detected concentrations were close to the MDLs and below the LOQs, the assigned RPD of 200% bears no significance and no results were qualified due to these two exceedances. It was, in addition, determined that the methylene chloride result in the replicate pair was likely an artifact of laboratory contamination, because the analyte was also detected in the method blank at a similar concentration. The analytes 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were detected in both the primary and duplicate field samples at concentrations well above their respective DOH Tier 1 EALs. The other PAHs with high RPDs were detected at concentrations well below their respective DOH Tier 1 EALs. Therefore, the lack of precision should not have a significant impact on the use of the data for the comparison to project action levels. The lack of precision in the data should, however, be considered when the data is compared to results of previous sampling events, to determine

whether concentrations have increased or decreased. Results for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were flagged accordingly, to indicate the lack of precision.

Although the RPD calculated for 1,1,2,2-tetrachloroethane duplicate results (10%) was well within the acceptance limits (<50%), the data should be used with caution because the results (0.065 and 0.059 µg/L) were only slightly lower than the Tier 1 EAL (0.067 µg/L).

The laboratory did not have sufficient sample volume left to analyze an MSD sample for TPH-d. However, field duplicate RPDs were within control limits and indicated that there were no matrix effects that negatively influenced overall precision.

RPDs for MS/MSD and LCS/LCSD pairs for all other analytes were within the control limits, and the data precision is considered acceptable.

Accuracy

Accuracy is defined as the degree of conformity of a measurement to a standard or true value. Accuracy is evaluated through measurement of the percent recovery of an analyte in a reference standard or spiked sample. Accuracy limits for surrogates, laboratory control spike, MS, and MSD samples are either prescribed by the Department of Defense [DoD] or established by the individual laboratory. The acceptance criteria for accuracy are dependent on the analytical method and are based on historical laboratory or DoD data.

Between July 2006 and July 2010, naphthalene was analyzed by both EPA Methods 8260B and 8270C, and both results were reported. In September 2005 and in all data beginning in October 2010, only results using EPA Method 8270C were reported. Naphthalene has historically only been detected at concentrations above the DOH Tier 1 EALs in well RHMW02. In this well, concentrations of naphthalene detected in each sample by EPA Method 8260B were generally two to three times higher than those detected by EPA Method 8270C. We assume this is due to the better preservation of VOCs associated with the use of EPA Method 8260B. This suggests that the naphthalene results provided by EPA Method 8270C may be biased low. Since March 2014, naphthalene concentrations in RHMW02 have exceeded the DOH Tier 1 EAL. Therefore, a low bias is unlikely to affect project decisions.

Similarly, the fairly large error inherent to the analysis of diesel- and oil-range hydrocarbons by EPA method 8015 should be considered when results are compared to each other, to action levels, and to results from previous sampling events. Any comparative analysis of the results should take into consideration the fairly wide method acceptance limits as per DoD Quality Systems Manual [QSM] Version 5.0 (36-132%) (DOD 2013).

Results for TPH-d in samples ES130, ES131, ES132, and ES133 were flagged “Y” to indicate that the chromatographic fingerprint of the samples resembled a petroleum product but did not match the calibration standard. Results for TPH-o in samples ES131, ES132, and ES133 were

flagged “L” to indicate that the results in this range were likely due to tailing of the diesel range product into the heavier oil range, and not due to the presence of an oil range petroleum product. Mismatches of this type are not uncommon and a review of sample chromatograms confirmed the flagging applied by the laboratory. The chromatograms of groundwater samples from RHMW02 did not indicate any significant changes in the type of petroleum product present in the well compared to data from previous sampling events.

The results for acenaphthylene in samples ES131 and ES132 and pyrene in sample ES131 were flagged “X” to indicate a possible high bias due to matrix interference. The issue was insignificant because the concentrations of these two analytes in all affected samples were well below the DOH EALs.

The MS and/or MSD recoveries were below the control limits for the VOCs (by EPA 8260) cis-1,3-dichloropropene, trans-1,3-dichloropropene, chlorobenzene, ethylbenzene, and 1,1,1,2-tetrachloroethane; the associated sample results may be biased low. Of these analytes, only ethylbenzene was detected, and only in samples ES131 and ES132 at a concentration below the LOQ and two orders of magnitude below the DOH Tier 1 EAL. The LCSD recoveries for cis-1,3-dichloropropene, trans-1,3-dichloropropene, and ethylbenzene were also below the control limits. LCSD recoveries were also slightly below the control limits for the VOCs (by EPA 8260-SIM) 1,2-dichloroethane, 1,2-dibromoethane, and bromodichloromethane; the associated sample results may be biased low. With the exception of 1,1,1,2-tetrachloroethane, the LOD for each VOC with an MS/MSD or LCSD recovery below the control limit was at least an order of magnitude below the DOH Tier 1 EAL; therefore, a slight low bias should not affect data usability. The LOQ for 1,1,1,2-tetrachloroethane (0.50 µg/L) was only slightly below the DOH Tier 1 EAL (0.52 µg/L); it is possible that a slight low bias may affect the ability to detect concentrations of 1,1,1,2-tetrachloroethane near the DOH Tier 1 EAL. However, 1,1,1,2-tetrachloroethane is not a petroleum constituent, and the potential bias was only slight. The impact of the issue on project decisions should be negligible.

The spike recoveries of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene from the MS/MSD were high. The concentrations of these three analytes in ES131, the primary sample on which the MS/MSD were performed, were significantly higher than the added spike concentration (2.36 µg/L), which prevented an accurate evaluation of the MS/MSD recovery for these analytes.

The surrogate spike recovery for 1,4-difluorobenzene in all samples was slightly above the control limit, indicating a potential slight high bias for TPH-g results. TPH-g was only detected in samples ES131 and ES132 and at a concentration below the DOH Tier 1 EAL; therefore, a slight high bias should not affect data usability. The surrogate spike recoveries for 4-bromofluorobenzene in sample ES130 and terphenyl-d14 in sample ES131 were below their respective control limits, indicating possible low biases for VOC and PAH (benz[a]anthracene, chrysene, and pyrene only) results, respectively, in these samples.

The recovery of the surrogate 4-bromofluorobenzene in sample ES130 was below the lower control limit only marginally and detection limits for all affected analytes were sufficiently below the DOH Tier 1 EAL to offset the potential bias. Consequently, the impact on data usability was insignificant.

The laboratory indicated multiple calibration QC-limit exceedances for VOCs (8260 and 8260-SIM) that may have an impact on data quality. However, most of these exceedances were marginal. The affected analytes were vinyl chloride, methylene chloride, chloroethane, methyl tert-butyl ether, chloroform, 1,1,1,-trichloroethane, carbon tetrachloride, cis-1,3-dichloropropene, and trans-1,3-dichloropropene. Because the exceedances only indicated a slight increase in the error associated with the results and because none of the analytes were detected, the impact on data usability was negligible.

For EPA 8260 analyses the DoD QSM 5.0 requires a closing Continuing Calibration Verification [CCV] to be recorded after the end of every batch run. Due to an oversight, the laboratory did not record a closing CCV for the sample batch. Therefore, verification of the calibration over the entire sample batch run was not possible. Nevertheless, the run was compliant with DoD QSM 4.2 requirements. All other required QC sample analyses for calibration verification were completed and were used to evaluate data quality.

Representativeness

Representativeness is the degree that data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness was achieved by conducting sampling in accordance with the sample collection procedures described in the project WP/SAP, including standardized sample collection methods (ESI, 2012).

Representativeness is also evaluated through the compliance with the standardized sample holding time and sample preservation methods, and through the analysis of blank samples, including method blank and trip blank samples. For this sampling event, all sample holding times and sample preservation were consistent with EPA guidance.

For this sampling event, one trip blank was included with the cooler containing samples for VOC and TPH-g analysis to assess the potential for contamination during sample transport. Methylene chloride, chloroform, and bromodichloromethane were detected in the trip blank at concentrations below their respective LOQs. Methylene chloride and bromodichloromethane were also detected in the method blanks, confirming that any methylene chloride or bromodichloromethane detected in the field samples at similar concentrations were an artifact of laboratory contamination. Methylene chloride was only detected in ES132 (but not in the replicate pair ES131) and, based on a comparison of the result to trip and method blank concentrations, was likely not representative of the groundwater conditions at the site. Because the concentration in the sample was significantly lower than the EAL, the issue did not affect data usability. The other two analytes detected in blanks, bromodichloromethane and

chloroform, were not detected in any of the field samples. Thus, their presence in trip or method blanks was irrelevant.

Additionally, TPH-d, TPH-o, and benz[a]anthracene were detected in the method blank at concentrations below their respective LOQs. There may be a high bias associated with these analytes and concentrations less than five times the contamination in the blanks were flagged "B" to indicate the impact of laboratory contamination on the result.

Based on the assessment of representativeness groundwater sample data are considered representative of the groundwater quality on site with the exception of results flagged due to laboratory contamination as noted above. The trip blank results are provided in Table 3.1.

Completeness

Completeness is defined as the overall percentage of valid analytical results (including estimated results) compared to the total number of analytical results reported by the analytical laboratory. No data were rejected for this project, and therefore the completeness goal for this project (90%) was successfully met. The laboratory provided data for 1,2-dibromoethane by EPA method 8260-SIM in addition to the data by EPA method 8011. Both datasets were usable and consistent with each other. The additional data did not impact data usability.

Comparability

Comparability expresses the confidence with which one data set can be compared to another data set. Comparability can be related to accuracy and precision because these quantities are measures of data reliability. Data with acceptable precision and accuracy are considered comparable if collection techniques, analytical procedures, methods and reporting are equivalent.

All samples collected from October 2010 to and including February 2015 were analyzed by Calscience Environmental Laboratories in Garden Grove, CA (now Eurofins Calscience). Samples starting April 2015 were analyzed by ALS Environmental in Kelso, WA. Analytical MDLs, LODs, and LOQs were lower for most analytes than they had been during previous events and several VOCs and PAHs were detected during the April 2015 event at concentrations that would have been below previous LODs and therefore not detected. The method used to analyze 1,2-dichloroethane, bromodichloromethane, dibromochloromethane, and 1,1,2,2-tetrachloroethane was changed from 8260 to 8260-SIM to improve sensitivity. Correspondingly, analysis of 1,2-dibromo-3-chloropropane and 1,2-dibromoethane was switched from 8260 to 8011 for the same reason. The significantly improved reporting limits should be considered when results are compared to data from previous events.

Additionally, during the April 2015 event, TPH-o was added to the analyte list. There are very few previous TPH-o results to compare this data to.

The TPH-g analysis of project samples through July 2010 was performed using EPA Method 8015. Between October 2010 and January 2015, TPH-g analysis was performed using EPA Method 8260. Beginning in April 2015, the use of EPA Method 8015 was reestablished. There was no event where both methods were used; consequently, there is no way to directly compare the results obtained by the two methods and to assess potential bias. However, there is no reason to believe that using either method should bias the data, and the TPH-g data for all events should be comparable.

Other than the lower detection limits, the addition of TPH-o to the analyte list, the large uncertainty inherent to EPA method 8015, and the naphthalene bias discussed above, no other issues with comparability were identified. The results are considered comparable within this data set and with the data collected from recent sampling events.

Sensitivity

The LOQs are established by the laboratory based on the LODs or instrument detection limits, historical data, and EPA limits established for the various methods. The LOQs and LODs for samples may require adjustment by the laboratory due to matrix interference or if high levels of target analytes necessitate dilution before analysis. Matrix interference and sample dilutions have the effect of decreasing sensitivity and increasing the LOQs/LODs.

Reporting limits significantly decreased for the April 2015 sampling compared to monitoring data from October 2010 through February 2015 due to a change of laboratories and the utilization of alternative methods. All LODs were below the DOH Tier 1 EALs with the exception of 1,2-dibromo-3-chloropropane and 1,2-dibromoethane analyzed by EPA method 8260. However, the two analytes were also reported by EPA method 8011, with LODs significantly lower than the applicable DOH Tier 1 EALs. Thus, the fact that LODs by 8260 exceeded DOH Tier 1 EALs was irrelevant.

The minimum relative response factor criterion was not met in the Initial Calibration and Continuing Calibration Verification (CCV) for 1,1,2,2-tetrachloroethane and in the CCV for bromodichloromethane. A subsequent reporting limit check passed evaluation criteria and demonstrated that the issue had no significant impact on method sensitivity. Similarly, the relative response factor for 2-methylnaphthalene in the closing CCV was below the minimum required value. However, results for the analyte in sample ES133 confirmed that the detection of very low concentrations in the proximity of the method detection limit was not impacted, and therefore, sensitivity for the detection of the analyte was demonstrated to be in line with project decision quality objectives.

3.2 DATA ASSESSMENT AND USABILITY CONCLUSIONS

The PARCCS criteria were evaluated, and with some exceptions, all criteria were met. Results associated with QC data that failed acceptance criteria are discussed in detail in section 3.1 of this report. Data quality issues that need to be taken into account for project decisions are summarized below.

The lack of precision determined for naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene results in samples ES131 and ES132 should be considered when the data is compared to results of previous sampling events, to determine whether concentrations have increased or decreased. During this event, Well RHMW02 was the only well where these analytes were detected at significant levels. Because the results for all three analytes in RHMW02 samples were well above their DOH Tier 1 EALs, the decision whether the results exceeded project action levels was not impacted. However, the imprecision associated with the results inhibits the ability to decide whether concentrations during the current GW sampling event have increased or decreased.

Although, as described in section 3.1 of this report, there is considerable error inherent to the analysis of diesel- and oil-range hydrocarbons by EPA method 8015, the TPH-d concentrations in Well RHMW02 were clearly above the applicable DOH Tier 1 EAL and the SSRBL, and were higher than the concentration determined during the previous sampling event. In contrast, the TPH-d concentration matched the DOH Tier 1 EAL in RHMW03, making it difficult to determine whether the actual concentration in the groundwater was above or below the DOH Tier 1 EAL during this sampling event and whether the concentration increased to any significant degree compared to the previous sampling event.

Finally, it should be noted that analytical MDLs, LODs, and LOQs decreased for the April 2015 sampling event compared to monitoring data from October 2010 through February 2015 due to a change of laboratories and the utilization of alternative methods. Analytes that were detected during the current event and were not detectable during past events include acenaphthene, acenaphthylene, benz[a]anthracene, fluorene, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene in RHMW01; benzene, 1,1,2,2-tetrachloroethane, acenaphthylene, and benz[a]anthracene in RHMW02; benz[a]anthracene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and phenanthrene in RHMW03; and benz[a]anthracene and phenanthrene in RHMW05. Consequently, these analytes may have been present at the currently detected concentrations during previous events without being detected and do not necessarily indicate any trend.

The data assessment concludes that all data generated during this event are usable for the intended purpose, with the limitations described above.

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TABLE 3.1
Quality Control Results for Groundwater Sampling (April 20 and 21, 2015)
Red Hill Bulk Fuel Storage Facility
April 2015 Quarterly Monitoring Report

Method	Chemical Constituent	DOH EAL	RHMW02 (ES131) >150 meters to surface water					RHMW02 (ES132) (DUP) >150 meters to surface water					RPD Duplicate (%)	ES Trip				
			Result	Q	LOQ	LOD	DL	Result	Q	LOQ	LOD	DL		Result	Q	LOQ	LOD	DL
EPA 8015C	TPH-g	100	46	J	50	25	13	47	J	50	25	13	2.15	N.D.	U	50	25	13
	TPH-d	100	5,200	Y	49	20	11	5,400	Y	49	20	11	3.77	-	-	-	-	-
	TPH-o	100	360	L	97	50	19	360	L	97	50	19	0.00	-	-	-	-	-
EPA 8270D SIM	Acenaphthene	20	0.24		0.020	0.0050	0.0044	0.51		0.020	0.0050	0.0044	72.00	-	-	-	-	-
	Acenaphthylene	30 / 240	0.10	X	0.020	0.0050	0.0034	0.26	X	0.020	0.0050	0.0034	88.89	-	-	-	-	-
	Anthracene	0.73 / 22	N.D.	U	0.020	0.0050	0.0036	N.D.	U	0.020	0.0050	0.0036	NA	-	-	-	-	-
	Benzo[a]anthracene	0.027 / 0.092	0.0047	JB	0.020	0.0050	0.0026	0.0030	JB	0.020	0.0050	0.0026	44.16	-	-	-	-	-
	Benzo[g,h,i]perylene	0.10 / 0.13	N.D.	U	0.020	0.0050	0.0029	N.D.	U	0.020	0.0050	0.0029	NA	-	-	-	-	-
	Benzo[a]pyrene	0.014 / 0.2	N.D.	U	0.020	0.0050	0.0043	N.D.	U	0.020	0.0050	0.0043	NA	-	-	-	-	-
	Benzo[b]fluoranthene	0.092	N.D.	U	0.020	0.0050	0.0041	N.D.	U	0.020	0.0050	0.0041	NA	-	-	-	-	-
	Benzo[k]fluoranthene	0.4	N.D.	U	0.020	0.0050	0.003	N.D.	U	0.020	0.0050	0.003	NA	-	-	-	-	-
	Chrysene	0.35 / 1	N.D.	U	0.020	0.0050	0.0034	N.D.	U	0.020	0.0050	0.0034	NA	-	-	-	-	-
	Dibenzo[a,h]anthracene	0.0092	N.D.	U	0.020	0.0050	0.0025	N.D.	U	0.020	0.0050	0.0025	NA	-	-	-	-	-
	Fluoranthene	8 / 130	N.D.	U	0.020	0.020	0.01	N.D.	U	0.020	0.020	0.01	NA	-	-	-	-	-
	Fluorene	3.9 / 240	0.14		0.020	0.005	0.0038	0.31		0.020	0.0050	0.0038	75.56	-	-	-	-	-
	Indeno[1,2,3-cd]pyrene	0.092	N.D.	U	0.020	0.005	0.0026	N.D.	U	0.020	0.0050	0.0026	NA	-	-	-	-	-
	1-Methylnaphthalene	2.1 / 4.7	31	JD	0.200	0.050	0.035	66	JD	0.40	0.10	0.76	74.75	-	-	-	-	-
	2-Methylnaphthalene	2.1 / 10	15	JD	0.200	0.050	0.023	37	JD	0.40	0.10	0.046	84.62	-	-	-	-	-
	Naphthalene	17	39	JD	0.200	0.050	0.038	140	JD	0.40	0.10	0.070	112.85	-	-	-	-	-
	Phenanthrene	4.6 / 240	N.D.	U	0.020	0.005	0.005	N.D.	U	0.020	0.0050	0.005	NA	-	-	-	-	-
	Pyrene	2 / 68	0.0058	JX	0.020	0.010	0.0053	N.D.	UJ	0.020	0.010	0.0053	200	-	-	-	-	-
EPA 8260C/ 8260-SIM/ 8011	1,1,1,2-Tetrachloroethane	0.52	N.D.	U	0.50	0.20	0.11	N.D.	U	0.50	0.20	0.11	NA	N.D.	U	0.50	0.20	0.11
	1,1,2,2-Tetrachloroethane	0.067	0.059		0.02	0.015	0.0067	0.065		0.02	0.015	0.0067	9.68	N.D.	U	0.02	0.015	0.0067
	1,1,1-Trichloroethane	62 / 200	N.D.	U	0.50	0.20	0.075	N.D.	U	0.50	0.20	0.075	NA	N.D.	U	0.50	0.20	0.075
	1,1,2-Trnchloroethane	5	N.D.	U	0.50	0.40	0.14	N.D.	U	0.50	0.40	0.14	NA	N.D.	U	0.50	0.40	0.14
	1,1-Dichloroethane	2.4	N.D.	U	0.50	0.20	0.077	N.D.	U	0.50	0.20	0.077	NA	N.D.	U	0.50	0.20	0.077
	1,1-Dichloroethylene	7	N.D.	U	0.50	0.20	0.08	N.D.	U	0.50	0.20	0.08	NA	N.D.	U	0.50	0.20	0.08
	1,2,3-Trichloropropane	0.6	N.D.	U	0.50	0.50	0.20	N.D.	U	0.50	0.50	0.20	NA	N.D.	U	0.50	0.50	0.20
	1,2,4-Trnchlorobenzene	25	N.D.	U	2.0	0.30	0.096	N.D.	U	2.0	0.30	0.096	NA	N.D.	U	2.0	0.30	0.096
	1,2-Dibromo-3- chloropropane	0.04	N.D.	U	0.0097	0.004	0.0036	N.D.	U	0.0096	0.004	0.0036	NA	N.D.	U	0.0096	0.004	0.0036
	1,2-Dibromoethane	0.04	N.D.	U	0.0097	0.004	0.0030	N.D.	U	0.0096	0.004	0.0030	NA	N.D.	U	0.0096	0.004	0.0030
	1,2-Dichlorobenzene	10	N.D.	U	0.50	0.20	0.12	N.D.	U	0.50	0.20	0.12	NA	N.D.	U	0.50	0.20	0.12
	1,2-Dichloroethane	0.15	N.D.	U	0.02	0.02	0.0058	N.D.	U	0.02	0.02	0.0058	NA	N.D.	U	0.02	0.02	0.0058
	1,2-Dichloropropane	5	N.D.	U	0.50	0.20	0.095	N.D.	U	0.50	0.20	0.095	NA	N.D.	U	0.50	0.20	0.095
	1,3-Dichlorobenzene	5	N.D.	U	0.50	0.20	0.10	N.D.	U	0.50	0.20	0.10	NA	N.D.	U	0.50	0.20	0.10
	1,3-Dichloropropene (total of cis/trans)	0.43	N.D.	U	0.50	0.20	0.18	N.D.	U	0.50	0.20	0.18	NA	N.D.	U	0.50	0.20	0.18
	1,4-Dichlorobenzene	5	N.D.	U	0.50	0.20	0.12	N.D.	U	0.50	0.20	0.12	NA	N.D.	U	0.50	0.20	0.12
	Acetone	1,500	N.D.	U	20	10	3.3	N.D.	U	20	10	3.3	NA	N.D.	U	20	10	3.3
	Benzene	5	0.09	J	0.50	0.10	0.062	0.08	J	0.50	0.10	0.062	11.76	N.D.	U	0.50	0.10	0.062
	Bromodichloromethane	0.12	N.D.	U	0.02	0.01	0.0034	N.D.	U	0.02	0.01	0.0034	NA	0.015	J	0.02	0.01	0.0034
	Bromoform	80	N.D.	U	0.50	0.50	0.16	N.D.	U	0.50	0.50	0.16	NA	N.D.	U	0.50	0.50	0.16
	Bromomethane	8.7	N.D.	U	0.50	0.30	0.10	N.D.	U	0.50	0.30	0.10	NA	N.D.	U	0.50	0.30	0.10
	Carbon Tetrachloride	5	N.D.	U	0.50	0.20	0.096	N.D.	U	0.50	0.20	0.096	NA	N.D.	U	0.50	0.20	0.096
	Chlorobenzene	25 / 50	N.D.	U	0.50	0.20	0.11	N.D.	U	0.50	0.20	0.11	NA	N.D.	U	0.50	0.20	0.11
	Chloroethane	16	N.D.	U	0.50	0.20	0.16	N.D.	U	0.50	0.20	0.16	NA	N.D.	U	0.50	0.20	0.16
	Chloroform	70	N.D.	U	0.50	0.20	0.072	N.D.	U	0.50	0.20	0.072	NA	0.090	J	0.50	0.20	0.072
	Chloromethane	1.8	N.D.	U	0.50	0.20	0.068	N.D.	U	0.50	0.20	0.068	NA	N.D.	U	0.50	0.20	0.068
	cis-1,2-Dichloroethylene	70	N.D.	U	0.50	0.20	0.067	N.D.	U	0.50	0.20	0.067	NA	N.D.	U	0.50	0.20	0.067
	Dibromochloromethane	0.16	N.D.	U	0.02	0.01	0.0068	N.D.	U	0.02	0.01	0.0068	NA	N.D.	U	0.02	0.01	0.0068
	Ethylbenzene	30	0.18	J	0.50	0.10	0.05	0.19	J	0.50	0.10	0.05	5.41	N.D.	U	0.50	0.10	0.05
	Hexachlorobutadiene	0.86	N.D.	U	2.0	0.30	0.11	N.D.	U	2.0	0.30	0.11	NA	N.D.	U	2.0	0.30	0.11
	Methyl ethyl ketone (2-Butanone)	7,100	N.D.	U	20	4	1.9	N.D.	U	20	4	1.9	NA	N.D.	U	20	4	1.9
	Methyl isobutyl ketone (4-Methyl-2-Pentanone)	170	N.D.	U	20	10	2.6	N.D.	U	20	10	2.6	NA	N.D.	U	20	10	2.6
	Methyl tert-Butyl Ether	5	N.D.	U	0.50	0.30	0.11	N.D.	U	0.50	0.30	0.11	NA	N.D.	U	0.50	0.30	0.11
	Methylene chloride	4.8	N.D.	UJ	2.00	0.20	0.10	0.10	J	2.00	0.20	0.10	200	0.18	J	2.00	0.20	0.10
	Styrene	10	N.D.	U	0.50	0.20	0.089	N.D.	U	0.50	0.20	0.089	NA	N.D.	U	0.50	0.20	0.089
	Tetrachloroethylene	5	N.D.	U	0.50	0.20	0.099	N.D.	U	0.50	0.20	0.099	NA	N.D.	U	0.50	0.20	0.099
	Toluene	40	N.D.	U	0.50	0.10	0.054	N.D.	U	0.50	0.10	0.054	NA	N.D.	U	0.50	0.10	0.054
	trans-1,2- Dichloroethylene	100	N.D.	U	0.50	0.20	0.072	N.D.	U	0.50	0.20	0.072	NA	N.D.	U	0.50	0.20	0.072
	Trichloroethylene	5	N.D.	U	0.50	0.10	0.10	N.D.	U	0.50	0.10	0.10	NA	N.D.	U	0.50	0.10	0.10
	Vinyl chloride	2	N.D.	U	0.50	0.10	0.075	N.D.	U	0.50	0.10	0.075	NA	N.D.	U	0.50	0.10	0.075
EPA 6020	Xylenes	20	0.26	J	1.0	0.20	0.18	0.30	J	1.0	0.20	0.18	14.29	N.D.	U	1.0	0.20	0.18
	Lead	5.6 / 15	0.016	J	0.02	0.01	0.005	0.025		0.02	0.01	0.005	43.90	-	-	0.02	0.01	0.005

The data are in micrograms per liter (µg/L). Shaded values exceeded the DOH EALs.

- Not Analyzed

DOH EAL DOH Tier 1 Environmental Action Levels for groundwater where groundwater is a current drinking water source (DOH, Fall 2011). Where two values are listed, the first is for sites less than (<) 150 meters from surface water and the second is for sites greater than (>) 150 meters from surface water.

DL Detection Limit or Method Detection Limit (MDL)

EPA Environmental Protection Agency

J Analyte was detected at a concentration below the LOQ and above the DL. Reported value is estimated.

L, Y, The chromatographic pattern was inconsistent with the profile of the reference fuel standard.

D The reported result is from a dilution.

X Possible high bias due to matrix interference.

LOD

LOQ

B

NA

N.D.

Q

TPH-g / TPH-d / TPH-o

U

Limit of Detection

Limit of Quantitation

Analyte was present in the associated method blank.

Both results for duplicate pair were non-detect, no RPD calculations.

Not Detected

Qualifiers

Total Petroleum Hydrocarbons as gasoline, diesel fuel, and oil

Undetected at DL and is reported as less than the LOD.

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SECTION 4 – SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

On April 20 and 21, 2015, ESI personnel collected groundwater samples from four monitoring wells at the RHSF (wells RHMW01, RHMW02, RHMW03, and RHMW05) and one sampling point at Red Hill Shaft (RHMW2254-01).

The groundwater sampling was conducted as part of the long-term groundwater and soil vapor monitoring program at the RHSF for NAVSUP FLC Pearl Harbor, under NAVFAC Contract Number N62742-12-D-1853. The sampling was conducted in accordance with the approved WP/SAP prepared by ESI. A summary of the analytical results is provided below.

- **RHMW01** – The only analytes detected in groundwater were TPH-d (170 µg/L), TPH-o (23 µg/L), several PAHs, and lead (0.624 µg/L). The concentration of TPH-d exceeded the DOH Tier 1 EAL, but did not exceed the SSRBL.
- **RHMW02** – Concentrations of TPH-d (5,200 and 5,400 µg/L), TPH-o (360 µg/L in both primary and duplicate samples), 1-methylnaphthalene (31 and 68 µg/L), 2-methylnaphthalene (15 and 37 µg/L), and naphthalene (39 and 140 µg/L) were detected in both the primary and duplicate samples collected exceeding their respective DOH Tier 1 EALs. The concentrations of TPH-d also exceeded the SSRBL of 4,500 µg/L. Concentrations of TPH-g (46 and 47 µg/L), several other VOCs and PAHs, and lead (0.016 and 0.025 µg/L) were also detected below the respective DOH Tier 1 EALs.
- **RHMW03** – The only analytes detected in groundwater were TPH-d (100 µg/L), TPH-o (110 µg/L), several PAHs, and lead (0.011 µg/L). The concentrations of TPH-d and TPH-o exceeded their respective DOH Tier 1 EALs, but did not exceed the SSRBL.
- **RHMW05** – The only analytes detected in groundwater were TPH-d (17 µg/L), TPH-o (34 µg/L), benzo[a]anthracene (0.0038 µg/L), phenanthrene (0.0052 µg/L), and lead (0.032 µg/L). The concentrations did not exceed the respective DOH Tier 1 EALs or the SSRBL.
- **RHMW2254-01** – The only analytes detected in groundwater were TPH-d (14 µg/L), TPH-o (37 µg/L), and lead (0.202 µg/L). The concentrations did not exceed the respective DOH Tier 1 EALs.

Groundwater Contaminant Trends

- **RHMW01** – The COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW01. The TPH-d concentration detected in RHMW01 during this event (170 µg/L) was the highest since January 2014; however, TPH-d concentrations have shown an overall decreasing trend from a high of 1,500 µg/L in February 2005.
- **RHMW02** – The COPCs detected during this round of quarterly sampling were generally consistent with the historical data for RHMW02. During the April 2015 event, concentrations of TPH-d, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene increased from the previous event in January 2015, with the concentrations of 2-methylnaphthalene increasing

to levels above the DOH Tier 1 EALs. As discussed in Section 3, there was a wide discrepancy between the PAH results in the primary and duplicate samples; due to this accuracy issue, it is possible that the PAH concentrations did not significantly increase. The concentration of TPH-d detected during the April 2015 event was the highest it has been since its historical high in October 2008, although the overall trend in TPH-d concentrations in the well since October 2008 continues to be decreasing. The concentrations of TPH-g remained below the DOH Tier 1 EALs and were comparable to the concentrations detected during the previous event.

- **RHMW03** – The COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW03. The TPH-d concentration detected in RHMW03 during this event (100 µg/L) was equal to the DOH Tier 1 EAL and was the highest concentration detected since October 2010.
- **RHMW05** – The COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW05. TPH-d has historically been detected in RHMW05 at concentrations above the DOH Tier 1 EAL; however, it has not been detected at concentrations above the DOH Tier 1 EAL since January 2010.
- **RHMW2254-01** – The COPCs detected during this round of quarterly sampling were consistent with the historical data for RHMW2254-01. Although the method reporting limits for TPH-d exceeded the DOH Tier 1 EAL between May 2009 and July 2010, TPH-d has not been detected in RHMW2254-01 at a concentration above the DOH Tier 1 EAL.

Previous groundwater monitoring reports have stated TPH-d was detected by the analytical laboratory at an estimated concentration of 102 µg/L and above the DOH Tier 1 EAL in January 2008. However, as noted in Section 1.3 of this report, the analytical result was reported as rejected in the March 2008 *Quarterly Groundwater Monitoring Report* due to laboratory contamination observed in the associated laboratory blank. Further review of the January 2008 analytical data and the 2007 NAVFAC *Pacific Project Procedures Manual for Standard and Full Validation Procedures for Extractable Total Petroleum Hydrocarbons, Method SW-846 8015B* concluded the result should be reported as non-detect with an LOD of 102 µg/L. The table of cumulative historical groundwater results included as Appendix B has been updated to reflect the correct reported result for January 2008. In addition, the analytical results for two split samples collected in February 2008 have been added to the table.

Conclusions and Recommendations

During the sampling event conducted on April 20 and 21, 2015, TPH-d in RHMW01, RHMW02, and RHMW03; TPH-o in RHMW02 and RHMW03; and 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in RHMW02 were detected at concentrations exceeding the DOH Tier 1 EALs. The concentration of TPH-d in RHMW02 also exceeded the SSRBL. The concentration of TPH-d in each well and the concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in RHMW02 increased from the previous event in January 2015. Groundwater contaminant concentrations in RHMW05, and RHMW2254-01

remained at low concentrations and did not change significantly from the previous event, or were not detected.

Concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene in RHMW02 have shown a generally increasing trend since March 2014. During the April 2015 event, the concentration of TPH-d in RHMW02 increased to its highest level since October 2008 and to a level similar to that reached in January 2014. All other analytical results were generally consistent with historical data.

Based on the groundwater monitoring results and the reported release at Tank 5 in January 2014, continued groundwater monitoring at the wells inside the RHSF tunnel is recommended.

Based on the analytical results from RHMW02 indicating TPH-d concentrations exceeded the SSRBL, and an increase in concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene, it is further recommended that additional samples be collected from wells RHMW01, RHMW02, and RHMW05 in June 2015 and analyzed for TPH-d, TPH-o, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene.

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SECTION 5 – FUTURE WORK

Future work includes the third quarter 2015 groundwater monitoring that is tentatively scheduled for July 2015. A quarterly groundwater monitoring report will be prepared to document the sampling event.

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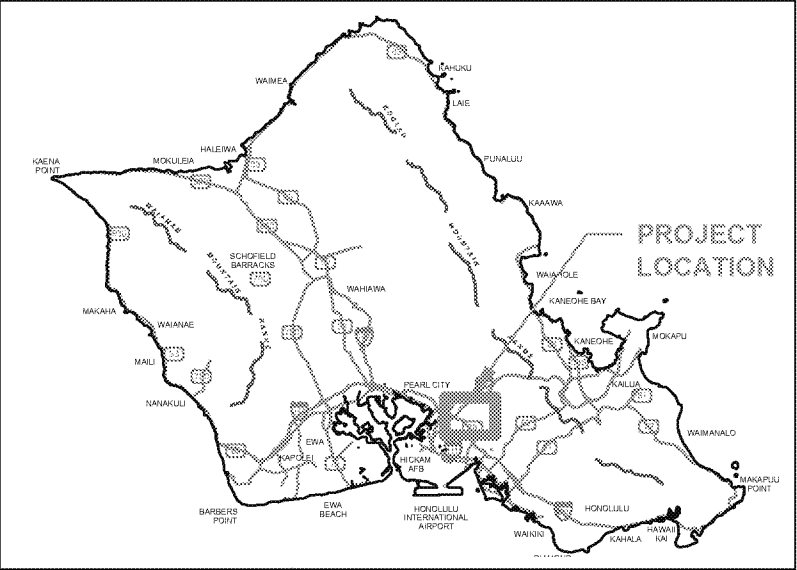
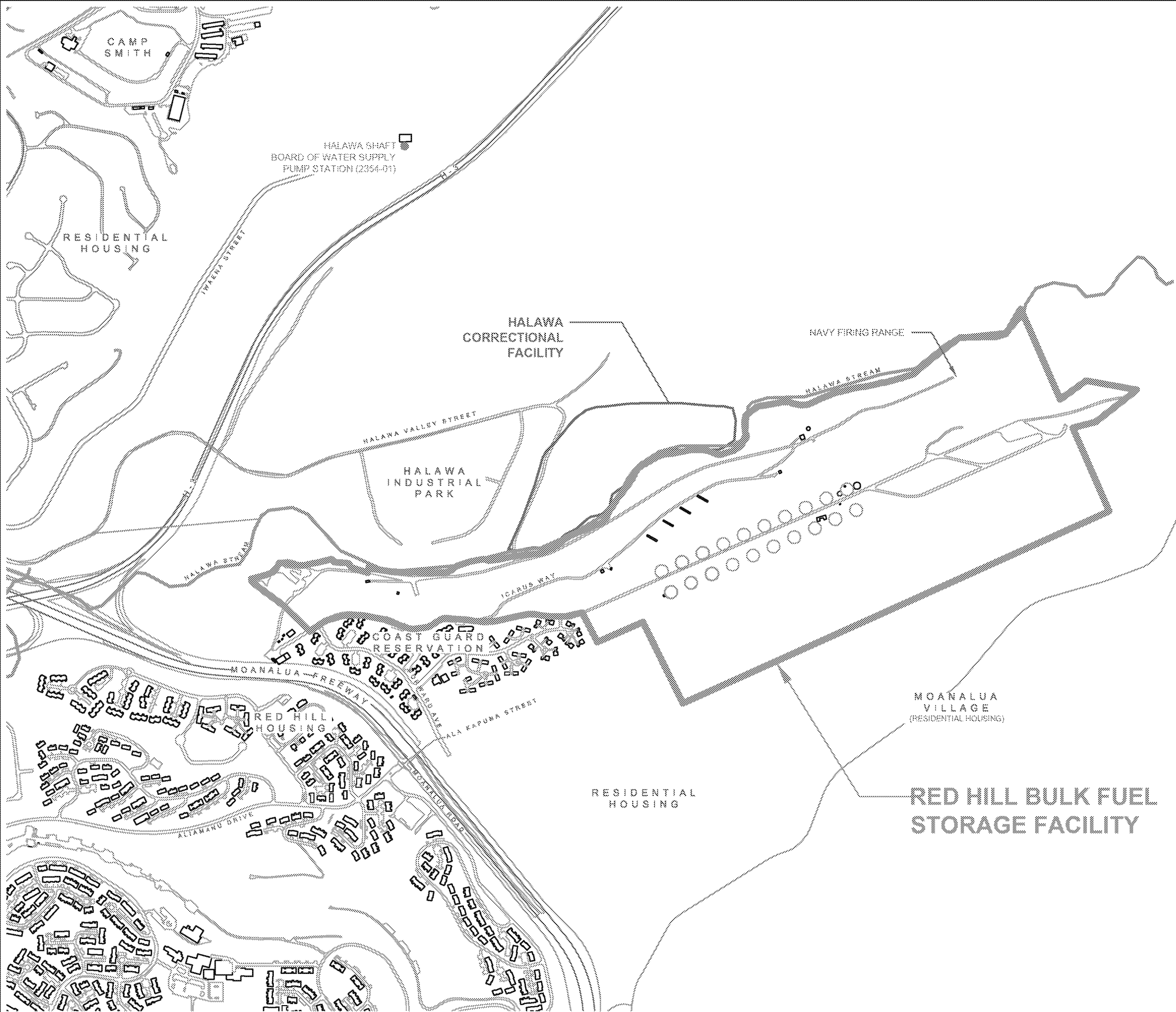
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FIGURES

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NOTES

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SOURCES

Pearl Harbor Base Map
Navy GIS files

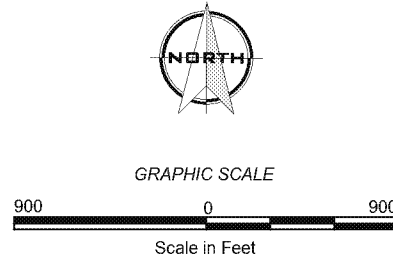
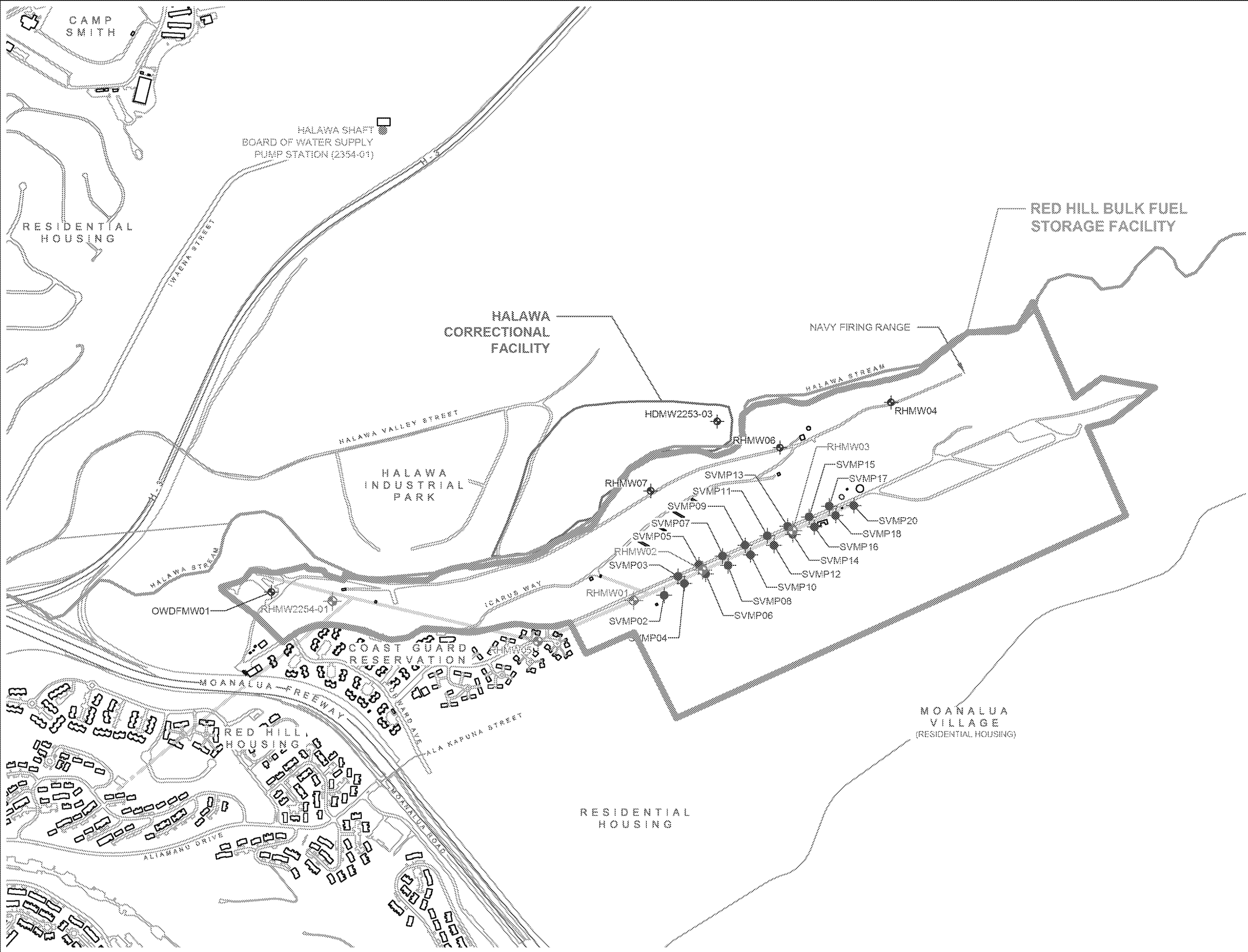


FIGURE 1
SITE LOCATION
GROUNDWATER MONITORING
RED HILL BULK FUEL STORAGE FACILITY
NAVAL SUPPLY SYSTEM COMMAND (NAVSUP)
FLEET LOGISTICS CENTER
JBPHH, OAHU, HAWAII

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LEGEND

RED HILL BULK FUEL STORAGE FACILITY

HALAWA CORRECTIONAL FACILITY

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SOURCES

Pearl Harbor Base Map

Navy GIS files

Well Installation Report, Battelle, March 2015

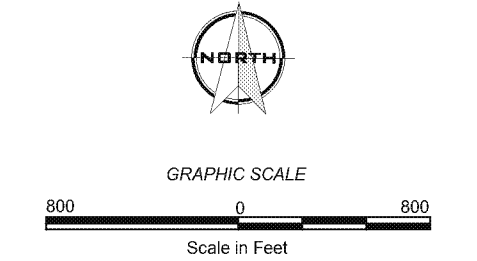


FIGURE 2
SITE LAYOUT
GROUNDWATER MONITORING
RED HILL BULK FUEL STORAGE FACILITY
NAVAL SUPPLY SYSTEM COMMAND (NAVSUP)
FLEET LOGISTICS CENTER
JBPHH, OAHU, HAWAII

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APPENDIX A

Quarterly Groundwater Monitoring Report, March 2008 (included on attached CD)

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APPENDIX B

Cumulative Groundwater Results

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Well Name	Sample ID	Date Sampled	8015														8260B																												
			TPH-d		TPH-g		TPH-o		TPH-g			1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)		1,4-Dichlorobenzene		Acetone					
			(µg/l)		(µg/l)				(µg/l)			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)							
For wells > 150 m from surface water	-	-																																											
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	100		100		100		100		200		5.0		2.4		7.0		0.6		70		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500						
RHMW01 102.27' TOC ELEV	RH-W-001	2/17/2005 ^b	1,400	Y	< 50 ^b	U	770	O	-		-		-		-		-		-		-		-		< 0.0083 ^b	U	-		< 0.50 ^b	U	-		-		-		-		-		-				
	RH-W-002	2/17/2005 ^{a,d}	1,500		< 50 ^b	U	890		-		-		-		-		-		-		-		-		< 0.0082 ^b	U	-		< 0.50 ^b	U	-		-		-		-		-		-				
	RH-W-003	6/28/2005 ^a	1,300	Z	<13	U	-		-		-		-		-		-		-		-		-		< 0.00096	U	-		< 0.50 ^b	U	-		-		-		-		-		-				
	RH-W-004	6/28/2005 ^{a,e}	1,100	Z	<13	U	-		-		-		-		-		-		-		-		-		<0.00095 ^d	U	-		< 0.50 ^b	U	-		-		-		-		-		-				
	RH-W-005	9/8/2005 ^a	950	Y	< 13	U	540	O	-		-		-		-		-		-		-		-		< 0.00096	U	-		< 0.12	U	-		-		-		-		-		-				
	RH-W-006	9/8/2005 ^{a,e}	1,100	Y	< 13	U	720	O	-		-		-		-		-		-		-		-		< 0.00096	U	-		< 0.12	U	-		-		-		-		-		-				
	RHMW01GW01	9/20/2005 ^b	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-				
	RH-W-007	12/6/2005 ^a	670	Z	< 13	U	-		-		-		-		-		-		-		-		-		< 0.0096	U	-		< 0.12	U	-		-		-		-		-		-				
	RH-W-008	12/6/2005 ^{a,e}	740	Z	< 13	U	-		-		-		-		-		-		-		-		-		< 0.0095	U	-		< 0.12	U	-		-		-		-		-		-				
	RHMW01-GW02	7/10/2006 ^{a,d}	509		< 50	U	-		-		< 0.50	U	-		-		< 0.50	U	-		< 0.50	U	-		-		-		-		-		-		-		-		-		-				
	RHMW01-GW06	12/5/2006 ^{ad}	303		< 50	U	-		-		< 0.50	U	-		-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-		-				
	RHMW01	3/27/2007 ^{ad}	307		< 50	U	-		-		< 0.5	U	< 0.5	U	-		-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5	U			U		
	RHMW01	6/12/2007 ^{ad}	274		< 50	U	-		-		< 0.5	U	< 0.5	U	-		-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5	U			U		
	RHMW01-WG09	9/10/2007 ^a	261		< 50	U	-		-		<0.29	U	< 0.3	U	-		-		< 0.22	U	< 0.41	U	-		-		-		-		< 0.25	U	< 0.23	U	-		< 0.22	U	< 10	U			U		
	RHMW01-WG10	1/15/2008 ^a	574		< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	-				
	RHMW01-WG11	4/15/2008 ^a	427	J	13.6	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U			U
	RHMW01-WG12	7/29/2008 ^a	327	J	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U			U
	RHMW01-WG13	10/22/2008 ^a	459		< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U			U
	RHMW01-WG14	2/4/2009 ^a	387	J	14.4	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U			U
	RHMW01-WG15	5/13/2009 ^a	373	J	16.6	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U			U
	RHMW01-WG16	7/15/2009 ^a	248	J	< 30.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U			U
	RHMW01-WG17	10/14/2009 ^a	299	F	< 30	U	-		-		< 0.31	U	< 0.31	U	< 0.31	U	-		< 0.31	U	< 0.31	U	< 0.62	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.15	U	< 3.1	U			U		
	RHMW01-WG18	1/27/2010	312	J	< 60.0	U	-		-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620														

Well Name	Sample ID	Date Sampled	8260B																								
			Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethylene	Dibromochloromethane	Ethylbenzene	Hexachlorobutadiene	Methyl ethyl ketone (2-Butanone)	Methyl isobutyl ketone (4-Methyl-2-Pentanone)	Methyl tert-butyl Ether	Methylene chloride	Naphthalene	Styrene	Tetrachloroethane, 1,1,1,2-					
(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)					
For wells > 150 m from surface water	-	-																									
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	5.0	0.12	80	8.7	5.0	50	16	70	1.8	70	0.16	30	0.86	7,100		170	5.0	4.8	17	10	0.52				
RHMW01 102.27' TOC ELEV	RH-W-001	2/17/2005 ^b	< 0.50 ^b	U	-	-	-	-	-	-	-	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-				
	RH-W-002	2/17/2005 ^{ab}	< 0.50 ^b	U	-	-	-	-	-	-	-	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-				
	RH-W-003	6/28/2005 ^a	< 0.50 ^b	U	-	-	-	-	-	-	-	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-				
	RH-W-004	6/28/2005 ^{ab}	< 0.50 ^b	U	-	-	-	-	-	-	-	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-				
	RH-W-005	9/8/2005 ^a	< 0.14	U	-	-	-	-	-	-	-	-	-	< 0.13	U	-	-	-	< 0.20	U	-	-	-				
	RH-W-006	9/8/2005 ^{ab}	< 0.14	U	-	-	-	-	-	-	-	-	-	< 0.13	U	-	-	-	< 0.20	U	-	-	-				
	RHMW01GW01	9/20/2005 ^b	< 0.50	U	-	-	-	-	-	-	-	-	-	< 0.50	U	-	-	-	< 0.50	U	-	-	-				
	RH-W-007	12/6/2005 ^b	< 0.14	U	-	-	-	-	-	-	-	-	-	< 0.13	U	-	-	-	< 0.20	U	-	-	-				
	RH-W-008	12/6/2005 ^{ab}	< 0.14	U	-	-	-	-	-	-	-	-	-	< 0.13	U	-	-	-	< 0.20	U	-	-	-				
	RHMW01-GW02	7/10/2006 ^{ad}	< 0.50	U	-	-	-	-	-	-	-	-	-	< 0.50	U	-	-	-	< 0.50	U	-	< 1.0	-				
	RHMW01-GW06	12/5/2006 ^{ad}	< 0.50	U	-	-	-	-	-	-	-	-	-	< 0.50	U	-	-	-	< 0.50	U	-	< 1.0	-				
	RHMW01	3/27/2007 ^{ad}	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-	< 0.5	U	< 0.5	U	< 2.5	U	-			
	RHMW01	6/12/2007 ^{ad}	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-	< 0.5	U	< 0.5	U	< 2.5	U	-			
	RHMW01-WG09	9/10/2007 ^a	< 0.2	U	< 0.29	U	< 0.28	U	< 0.54	U	< 0.29	U	< 0.46	U	< 0.21	U	< 0.38	U	< 0.28	U	-	< 0.2	U	< 0.57	U	< 2	
	RHMW01-WG10	1/15/2008 ^a	< 0.120	U	< 0.150	U	< 0.500	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.180	U	< 3.10	U	< 3.10
	RHMW01-WG11	4/15/2008 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10
	RHMW01-WG12	7/29/2008 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10
	RHMW01-WG13	10/22/2008 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10
	RHMW01-WG14	2/4/2009 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10
	RHMW01-WG15	5/13/2009 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10
	RHMW01-WG16	7/15/2009 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10
	RHMW01-WG17	10/14/2009 ^a	< 0.12	U	< 0.15	U	< 0.31	U	< 0.94	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.3	U	< 0.31	U	< 0.31	U	< 0.31	U	< 4.27	F	< 3.1
	RHMW01-WG18	1/27/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.620	U	< 6.20	U	< 3.00
	RHMW01-WG19	4/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.620	U	< 6.20	U	< 3.00
	RHMW01-WG20	7/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.620	U	< 6.20	U	< 3.00
	ES009	11/3/2010	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES015	1/20/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES033	4/28/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES041	7/20/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES057	11/2/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.13	J	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES069	2/14/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES075	4/17/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20
	ES088	7/20/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	<				

Well Name	Sample ID	Date Sampled	8260B										8260SIM						8011			8270C							
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene	Toluene	trans-1,2- Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes, Total (p/m-, o- xylene)	1,2-Dibromoethane	1,2-Dichloroethane	Bromodichloromethane	Dibromochloromethane	Tetrachloroethane, 1,1,2,2-	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[g,h,i]perylene								
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)								
For wells > 150 m from surface water	-	-																											
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.067	5.0	40	100	5.0	2.0	20	0.04	0.15	0.12	0.16	0.067	0.04	0.04	20	240	22	0.092	0.13								
RHMW01 102.27' TOC ELEV	RH-W-001	2/17/2005 ^b	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-	-	-	-	0.052	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	
	RH-W-002	2/17/2005 ^{ad}	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-	-	-	-	0.054	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	
	RH-W-003	6/28/2005 ^a	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-	-	-	-	0.061	< 0.020 ^b	U	< 0.020 ^b	U	0.047	0.034					
	RH-W-004	6/28/2005 ^{ad}	-	-	< 0.50 ^b	U	-	-	-	< 0.50 ^b	U	-	-	-	-	-	-	0.061	< 0.020 ^b	U	< 0.020 ^b	U	0.033	0.022					
	RH-W-005	9/8/2005 ^a	-	-	0.15	J	-	-	-	< 0.22	U	-	-	-	-	-	-	0.054	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	
	RH-W-006	9/8/2005 ^{ad}	-	-	0.15	J	-	-	-	< 0.22	U	-	-	-	-	-	-	0.056	< 0.020 ^b	U	< 0.020 ^b	U	0.025	< 0.020 ^b	U	< 0.020 ^b	U		
	RHMW01GW01	9/20/2005 ^b	-	-	< 0.50	U	-	< 0.50	U	-	< 0.50	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	RH-W-007	12/6/2005 ^a	-	-	0.12	J	-	-	-	< 0.33	U	-	-	-	-	-	-	0.061	< 0.0018	U	0.012	J	0.027	0.015	J				
	RH-W-008	12/6/2005 ^{ad}	-	-	< 11	U	-	-	-	< 0.33	U	-	-	-	-	-	-	0.058	< 0.0018	U	< 0.0011	U	0.0077	J	0.0057	J			
	RHMW01-GW02	7/10/2006 ^{ad}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	< 0.50	U	-	-	-	-	-	-	-	-	-	
	RHMW01-GW06	12/5/2006 ^{ad}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	< 0.50	U	-	-	-	-	-	-	-	-	-	
	RHMW01	3/27/2007 ^{ad}	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	< 0.5	U	< 0.5	U	< 0.5	U	-	-	< 0.099	U		
	RHMW01	6/12/2007 ^{ad}	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	< 0.51	U	< 0.51	U	< 0.51	U	-	-	< 0.1	U		
	RHMW01-WG09	9/10/2007 ^a	< 0.37	U	< 0.25	U	< 0.27	U	< 0.2	U	< 0.38	U	< 0.34	U	< 0.36	U	-	< 0.5	U	< 0.5	U	< 0.5	U	-	-	< 0.1	U		
	RHMW01-WG10	1/15/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	0.0310	J	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U		
	RHMW01-WG11	4/15/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	0.0406	J	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U		
	RHMW01-WG12	7/29/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U		
	RHMW01-WG13	10/22/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U		
	RHMW01-WG14	2/4/2009 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U		
	RHMW01-WG15	5/13/2009 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	0.0243	J	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U		
	RHMW01-WG16	7/15/2009 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	0.180	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	
	RHMW01-WG17	10/14/2009 ^a	< 0.15	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 1	U	-	0.0177	F	< 0.0174	U	< 0.0174	U	< 0.0174	U	< 0.0174	U		
	RHMW01-WG18	1/27/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	0.0372	J	< 0.0334	U	< 0.0334	U	< 0.0334	U	< 0.0334	U		
	RHMW01-WG19	4/13/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	0.0450	J	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U		
	RHMW01-WG20	7/13/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	0.0321	J	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U		
	ES009	11/3/2010	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES015	1/20/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES033	4/28/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES041	7/20/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES057	11/2/2011	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	<																

Well Name	Sample ID	Date Sampled	8270C																	6020	6010B/6020/200.8												
			Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Dissolved Lead (filtered)	Total Lead (unfiltered)																
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)															
For wells > 150 m from surface water	-	-																															
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.20	0.092	0.40	1.0	0.0092	130	240	0.092	4.7	10	17	240	68	15	-																
RHMW01 102.27' TOC ELEV	RH-W-001	2/17/2005 ^b	0.022	0.025	< 0.020 ^b	U	0.020	< 0.020 ^a	U	0.035	0.053	< 0.020 ^b	U	-	0.14	0.25	0.12	0.056	10.2	-													
	RH-W-002	2/17/2005 ^{c,d}	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	0.021	0.043	< 0.020 ^b	U	-	0.057	0.21	0.082	0.029	11.9	-												
	RH-W-003	6/28/2005 ^e	0.045		0.040		0.051		0.062		< 0.020 ^a	U	0.093	0.041	0.037		-	0.054	0.073	0.14	0.11	6.700	-										
	RH-W-004	6/28/2005 ^{e,g}	0.031		0.028		0.035		0.044		< 0.020 ^a	U	0.064	0.039	0.024		-	0.051	0.055	0.10	0.072	6.980	-										
	RH-W-005	9/8/2005 ^f	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	0.022		< 0.020 ^b	U	0.025	0.064	< 0.020 ^b	U	-	0.038	0.83	0.11	0.030	0.21	-										
	RH-W-006	9/8/2005 ^{g,h}	< 0.020 ^b	U	< 0.020 ^b	U	< 0.020 ^b	U	0.036		< 0.020 ^b	U	0.049	0.064	< 0.020 ^b	U	-	0.038	0.78	0.12	0.058	0.05	-										
	RHMW01GW01	9/20/2005 ⁱ	-		-		-		-		-		-		-		-	-	-	-	-	-	19.6 ^j										
	RH-W-007	12/6/2005 ^k	0.024		0.020	J	0.017	J	0.036	< 0.0017	U	0.062		0.058	0.017	J	-		0.098	0.51		0.10	0.072	0.06	-								
	RH-W-008	12/6/2005 ^{k,l}	0.0086	J	0.0072	J	0.0068	J	0.014	J	< 0.0017	U	0.026		0.050		0.0075	J	-		0.11		0.48		0.059	0.026	0.04	-					
	RHMW01-GW02	7/10/2006 ^m	< 0.10	U	-		-		-		< 0.25	U	-		-		-		< 0.25	U	-		-		< 1.7	U	-						
	RHMW01-GW06	12/5/2006 ^{n,o}	< 0.099	U	-		-		-		< 0.25	U	-		-		-		< 0.25	U	-		-		< 1.7	U	-						
	RHMW01	3/27/2007 ^{p,q}	< 0.099	U	< 0.05	U	< 0.099	U	< 0.099	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 1.7	J	-				
	RHMW01	6/12/2007 ^{r,s}	< 0.1	U	< 0.051	U	< 0.1	U	< 0.1	U	< 0.051	U	< 0.25	U	< 0.25	U	< 0.051	U	< 0.25	U	< 0.25	U	< 0.51	U	< 0.25	U	< 3.4	U	-				
	RHMW01-WG09	9/10/2007 ^t	< 0.1	U	< 0.05	U	< 0.1	U	< 0.1	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 2.1	U	-				
	RHMW01-WG10	1/15/2008 ^u	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	0.0371	J	< 0.0158	U	0.0640		0.210		< 0.0158	U	< 0.0158	U	< 0.310	U	-				
	RHMW01-WG11	4/15/2008 ^v	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	0.0375	J	< 0.0160	U	0.101		0.0789		0.216		< 0.0160	U	< 0.0160	U	< 0.310	U	-		
	RHMW01-WG12	7/29/2008 ^w	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.0206	J	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.114		< 0.0150	U	< 0.0150	U	< 0.310	U	-		
	RHMW01-WG13	10/22/2008 ^x	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.0207	J	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.103		< 0.0150	U	< 0.0150	U	0.966	J	-		
	RHMW01-WG14	2/4/2009 ^y	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	0.0235	J	< 0.0165	U	< 0.0165	U	< 0.0165	U	0.173		< 0.0165	U	< 0.0165	U	< 0.310	U	-		
	RHMW01-WG15	5/13/2009 ^z	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.0246	J	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.182		< 0.0150	U	< 0.0150	U	< 0.310	U	-		
	RHMW01-WG16	7/15/2009 ^{aa}	< 0.0158	U	< 0.0158	U	< 0.0158	U	0.0159	J	< 0.0158	U	0.0263	J	0.0952		< 0.0158	U	9.44		3.07		5.61		0.0349	J	0.0270	J	< 0.310	U	-		
	RHMW01-WG17	10/14/2009 ^{ab}	< 0.0174	U	< 0.0174	U	< 0.0174	U	< 0.0174	U	< 0.0174	U	< 0.0174	U	0.0288	F	< 0.0174	U	< 0.0174	U	< 0.0174	U	0.193		< 0.0174	U	< 0.0174	U	< 0.31	U	-		
	RHMW01-WG18	1/27/2010	< 0.0334	U	< 0.0334	U	< 0.0334	U	< 0.0334	U	< 0.0334	U	< 0.0334	U	0.0384	J	< 0.0334	U	< 0.0334	U	0.0559		0.330		0.0204	J	< 0.0334	U	< 0.620	U	-		
	RHMW01-WG19	4/13/2010	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	0.0455	J	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0666	U	< 0.0322	U	< 0.0322	U	< 0.620	U	-		
	RHMW01-WG20	7/13/2010	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	0.0350	J	< 0.0316	U	< 0.0316	U	< 0.0316	U	0.184		< 0.0316	U	< 0.0316	U	< 0.620	U	-		
	ES009	11/3/2010	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	0.17	J		< 0.16	U	< 0.16	U	0.47	J	-			
	ES015	1/20/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.14	U	< 0.16	U	< 0.22	U	-		
	ES033	4/28/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.14	U	< 0.16	U	< 0.22	U	-		
	ES041	7/20/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	0.12	J	< 0.14	U	< 0.16	U	0.17	J	-		
	ES057	11/2/2011	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.14	U	< 0.16	U	< 0.22	U	-		
	ES069	2/14/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.14	U	< 0.16	U	< 0.22	U	-		
	ES075	4/17/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.14	U	< 0.16	U	< 0.22	U	-		
	ES088	7/20/2012	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	0.13	J	< 0.14	U	< 0.16	U	0.60		-		
	ES001	10/22/2012	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.178	J	-		
	ES010	2/4/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.10	J	< 0.050	U	< 0.050	U	< 0.050	U	0.846	J	-		
	ES019	4/22/2013	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	0.641	J	-		
	ES028	7/22/2013	< 0.050	U	< 0.052	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.048	J	< 0.050	U	< 0.050	U	< 0.050	U	< 0.200	U	-		
	ES037	10/21/2013	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	0.027	J	2.06	-	
	ES048	1/15/2014	-		-		-		-		-		-		0.040	J	0.039	J	0.062	J	-		-		-		-		-	-	-		
	ES056	1/28/2014	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.045	J	< 0.050	U	< 0.050	U	< 0.050	U	0.205	J	-		
	ES062	2/24/2014	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.035	J	< 0.050	U	< 0.050	U	< 0.050	U	0.037	J	< 0.050	U	< 0.050	U	< 0.050	U	0.195	J	-		
	ES064	3/5/2014	-		-		-		-		-		-		< 0.050	U	0.038	J	< 0.050	U	-		-		-		0.112	J		-			
	ES069	3/10/2014	-		-		-		-		-		-		< 0.052	U	< 0.052	U	< 0.052	U	-		-		-		< 0.200	U		-			
	ES072	3/25/2014	-		-		-		-		-		-		< 0.051	U	< 0.051	U	< 0.051	U	-		-		-		0.110	J		-			
	ES077	4/7/2014	-		-		-																										

Well Name	Sample ID	Date Sampled	8015														8260B																									
			TPH-d		TPH-g		TPH-o		TPH-g			1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)		1,4-Dichlorobenzene		Acetone		
			(µg/l)		(µg/l)				(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)			
For wells > 150 m from surface water	-	-																																								
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	100		100		100		100		200		5.0		2.4		7.0		0.6		70		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500			
RHMW02 104.76' TOC ELEV	RHMW02W01	9/20/2005 ⁵	2,660		< 50	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	RHMW02Q01	9/20/2005 ^{4,5}	2,500		< 50	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	RHMW02-GW02	7/10/2006 ⁵	2,800		124		-		-		< 0.50	U	-		-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		6.2	J		
	RHMW05-GW02	7/10/2006 ^{4,5}	2,790		119		-		-		< 2.5	U	-		-		< 2.5	U	-		-		-		-		-		-		-		-		-		-		-			
	RHMW02-GW06	12/5/2006 ⁵	2,600		110		-		-		< 0.50	U	-		-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-			
	RHMWA01-GW06	12/5/2006 ^{4,5}	2,690		138		-		-		< 0.50	U	-		-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-			
	RHMW02-WG07	3/27/2007 ⁵	2,750	O	122	O	-		-		< 0.5	U	< 0.5	U	-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5		< 5	U		
	RHMWA01-WG07	3/27/2007 ^{4,5}	2,250	O	148	O	-		-		< 0.5	U	< 0.5	U	-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5		< 5	U		
	RHMW02-WG08	6/12/2007 ⁵	2750		52.5	J	-		-		< 0.5	U	< 0.5	U	-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5		< 5	U		
	RHMWA01-WG08	6/12/2007 ^{4,5}	2900		56.5	J	-		-		< 0.5	U	< 0.5	U	-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5		< 5	U		
	RHMW02-WG09	9/10/2007 ⁵	2,810		76	J	-		-		<0.29	U	< 0.3	U	-		-		-		< 0.22	U	< 0.41	U	-		-		< 0.25	U	< 0.23	U	-		< 0.22	U	< 10		< 10	U		
	RHMWA01-WG09	9/10/2007 ^{4,5}	3,180		78.2	J	-		-		<0.29	U	< 0.3	U	-		-		-		< 0.22	U	< 0.41	U	-		-		< 0.25	U	< 0.23	U	-		< 0.22	U	< 10		< 10	U		
	RHMW02-WG10	1/15/2008 ⁵	2,310		64.3	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	-			
	RHMWA01-WG10	1/15/2008 ^{4,5}	3,230		66.2	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	-			
	RHMW02-WG11	4/15/2008 ⁵	3,120		58.9	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10		U	
	RHMWA01-WG11	4/15/2008 ^{4,5}	3,020		58.9	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10		U	
	RHMW02-WG12	7/29/2008 ⁵	4,470		61.7	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10		U	
	RHMWA01-WG12	7/29/2008 ^{4,5}	3,640		61.2	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10		U	
	RHMW02-WG13	10/22/2008 ⁵	4,540		52.8	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10		U	
	RHMWA01-WG13	10/22/2008 ^{4,5}	6,300		52.9	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10		U	
	RHMW02-WG14	2/4/2009 ⁵	2,840		52.3	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	8.51	J		
	RHMWA01-WG14	2/4/2009 ^{4,5}	2,840		54.3	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	8.59	J		
	RHMW02-WG15	5/13/2009 ⁵	1,620		39.1	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U														

Well Name	Sample ID	Date Sampled	8260B																																								
			Benzene		Bromodichloromethane		Bromoform		Bromomethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethylene		Dibromochloromethane		Ethylbenzene		Hexachlorobutadiene		Methyl ethyl ketone (2-Butanone)			Methyl isobutyl ketone (4-Methyl-2-Pentanone)		Methyl tert-butyl Ether		Methylene chloride		Naphthalene		Styrene		Tetrachloroethane, 1,1,1,2-	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		
For wells > 150 m from surface water	-	-																																									
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	5.0		0.12		80		8.7		5.0		50		16		70		1.8		70		0.16		30		0.86		7,100			170		5.0		4.8		17		10		0.52	
RHMW02 104.76' TOC ELEV	RHMW02W01	9/20/2005 ^b	< 2.5	U	-		-		-		-		-		-		-		-		-		-		< 2.5	U	-		-		-		< 2.5	U	-		283	J	-		-		
	RHMW02Q01	9/20/2005 ^{cd}	< 2.5	U	-		-		-		-		-		-		-		-		-		-		< 2.5	U	-		-		-		< 2.5	U	-		319		-		-		
	RHMW02-GW02	7/10/2006 ^a	< 0.50	U	-		-		-		-		-		-		-		-		-		-		1.3		-		-		-		< 0.50	U	-		343		-		-		
	RHMW05-GW02	7/10/2006 ^{ab}	< 2.5	U	-		-		-		-		-		-		-		-		-		-		< 2.5	U	-		-		-		< 2.5	U	24.9	JB	335		-		-		
	RHMW02-GW06	12/5/2006 ^a	< 0.50	U	-		-		-		-		-		-		-		-		-		-		1.2		-		-		-		< 0.50	U	-		257		-		-		
	RHMWA01-GW06	12/5/2006 ^{ab}	< 0.50	U	-		-		-		-		-		-		-		-		-		-		1.1		-		-		-		< 0.50	U	-		269		-		-		
	RHMW02-WG07	3/27/2007 ^a	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-		< 0.5	U	< 0.5	U	< 2.5	U	< 2.5	U	-		< 1	U	195	O	< 0.5	U	< 0.5	U	
	RHMWA01-WG07	3/27/2007 ^{ad}	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-		< 0.5	U	< 0.5	U	< 2.5	U	< 2.5	U	-		< 1	U	207	O	< 0.5	U	< 0.5	U	
	RHMW02-WG08	6/12/2007 ^a	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-		< 0.5	U	< 0.5	U	< 2.5	U	< 2.5	U	-		< 1	U	209		< 0.5	U	< 0.5	U	
	RHMWA01-WG08	6/12/2007 ^{ad}	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-		< 0.5	U	< 0.5	U	< 2.5	U	< 2.5	U	-		< 1	U	207		< 0.5	U	< 0.5	U	
	RHMW02-WG09	9/10/2007 ^a	< 0.2	U	< 0.29	U	< 0.28	U	< 0.54	U	< 0.29	U	< 0.2	U	< 0.46	U	< 0.21	U	< 0.38	U	< 0.28	U	-		< 0.2	U	< 0.57	U	< 2	U	< 2.2	U	-		< 1	U	206		< 0.2	U	< 0.25	U	
	RHMWA01-WG09	9/10/2007 ^{ad}	< 0.2	U	< 0.29	U	< 0.28	U	< 0.54	U	< 0.29	U	< 0.2	U	< 0.46	U	< 0.21	U	< 0.38	U	< 0.28	U	-		< 0.2	U	< 0.57	U	< 2	U	< 2.2	U	-		< 1	U	264		< 0.2	U	< 0.25	U	
	RHMW02-WG10	1/15/2008 ^a	0.170	J	< 0.150	U	< 0.500	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.180	U	< 3.10	U	< 3.10	U	< 1.50	U	< 0.310	U	195		< 0.310	U	< 0.150	U	
	RHMWA01-WG10	1/15/2008 ^{ad}	0.170	J	< 0.150	U	< 0.500	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	0.350	J	< 0.180	U	< 3.10	U	< 3.10	U	< 1.50	U	< 0.310	U	194		< 0.310	U	< 0.150	U	
	RHMW02-WG11	4/15/2008 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	290		< 0.310	U	< 0.150	U	
	RHMWA01-WG11	4/15/2008 ^{ad}	0.150	J	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	293		< 0.310	U	< 0.150	U	
	RHMW02-WG12	7/29/2008 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	0.580	J	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	320		< 0.310	U	< 0.150	U	
	RHMWA01-WG12	7/29/2008 ^{ad}	0.120	J	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	0.560	J	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	309		< 0.310	U	< 0.150	U	
	RHMW02-WG13	10/22/2008 ^a	0.140	J	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	0.450	J	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	239		< 0.310	U	< 0.150	U	
	RHMWA01-WG13	10/22/2008 ^{ad}	0.150	J	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	0.420	J	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	245		< 0.310	U	< 0.150	U	
	RHMW02-WG14	2/4/2009 ^a	0.260	J	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	0.490	J	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	4><						

Well Name	Sample ID	Date Sampled	8260B										8260SIM						8011			8270C						
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes, Total (p/m-, o-xylene)	1,2-Dibromoethane	1,2-Dichloroethane	Bromodichloromethane	Dibromochloromethane	Tetrachloroethane, 1,1,2,2-	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[g,h,i]perylene							
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)							
For wells > 150 m from surface water	-	-																										
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.067	5.0	40		100	5.0	2.0	20		0.04	0.15	0.12	0.16	0.067	0.04	0.04	20	240	22		0.092		0.13			
RHMW02 104.76' TOC ELEV	RHMW02W01	9/20/2005 ⁵	-	-	< 2.5	U	-	8.2	-	< 2.5	U	-	-	-	-	-	-	-	< 0.52	U	< 0.52	U	< 0.52	U	< 0.52	U	< 0.10	U
	RHMW02Q01	9/20/2005 ^{5b}	-	-	< 2.5	U	-	< 2.5	U	-	< 2.5	U	-	-	-	-	-	-	< 0.52	U	< 0.52	U	< 0.52	U	0.071	J	< 0.10	U
	RHMW02-GW02	7/10/2006 ⁵	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	-	0.63	J	-	-	-	-	-	-	-	
	RHMW05-GW02	7/10/2006 ^{5a}	-	< 2.5	U	< 2.5	U	-	< 2.5	U	< 2.5	U	-	-	-	-	-	-	0.58	J	-	-	-	-	-	-	-	
	RHMW02-GW06	12/5/2006 ⁵	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	-	0.53	J	-	-	-	-	-	-	-	
	RHMWA01-GW06	12/5/2006 ^{5a}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	-	0.51	J	-	-	-	-	-	-	-	
	RHMW02-WG07	3/27/2007 ⁵	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	-	0.66	J	< 0.48	U	< 0.48	U	-	-	< 0.096	U
	RHMWA01-WG07	3/27/2007 ^{5b}	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	-	0.56	J	< 0.48	U	< 0.48	U	-	-	< 0.096	U
	RHMW02-WG08	6/12/2007 ⁵	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	-	< 0.49	U	< 0.49	U	< 0.49	U	-	-	< 0.098	U
	RHMWA01-WG08	6/12/2007 ^{5a}	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	-	0.86	J	< 0.49	U	< 0.49	U	-	-	< 0.098	U
	RHMW02-WG09	9/10/2007 ⁵	< 0.37	U	< 0.25	U	< 0.27	U	< 0.2	U	< 0.38	U	< 0.34	U	< 0.36	U	-	-	0.60	J	< 0.5	U	< 0.5	U	-	-	< 0.1	U
	RHMWA01-WG09	9/10/2007 ^{5a}	< 0.37	U	< 0.25	U	< 0.27	U	< 0.2	U	< 0.38	U	< 0.34	U	< 0.38	U	-	-	0.59	J	< 0.5	U	< 0.5	U	-	-	< 0.1	U
	RHMW02-WG10	1/15/2008 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	1.06		-	-	-	-	0.308		< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U
	RHMWA01-WG10	1/15/2008 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	1.10		-	-	-	-	0.303		< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U
	RHMW02-WG11	4/15/2008 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.740	J	-	-	-	-	0.404		< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U
	RHMWA01-WG11	4/15/2008 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.750	J	-	-	-	-	0.346		< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U
	RHMW02-WG12	7/29/2008 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	-	-	0.470	J	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U
	RHMWA01-WG12	7/29/2008 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	-	-	0.450	J	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U
	RHMW02-WG13	10/22/2008 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.450	J	-	-	-	-	0.365		< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U
	RHMWA01-WG13	10/22/2008 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.490	J	-	-	-	-	0.208		< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U
	RHMW02-WG14	2/4/2009 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.400	J	-	-	-	-	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U
	RHMWA01-WG14	2/4/2009 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.470	J	-	-	-	-	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U
	RHMW02-WG15	5/13/2009 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	0.310	J	-	-	-	-	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U
	RHMWA01-WG15	5/13/2009 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	-	-	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U
	RHMW02-WG16	7/15/2009 ⁵	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	-	-	0.235		< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U
	RHMWA01-WG16	7/15/2009 ^{5a}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	-	-	0.213		< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U
	RHMW02	10/13/2009 ^{5a}	< 0.15	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 1	U	-	-	-	-	0.2		< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U
	RHMWA01-WG17	10/13/2009 ^{5a}	< 0.15	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 1	U	-	-	-	-	0.210		< 0.0179	U	< 0.0179	U	< 0.0179	U	< 0.0179	U
	RHMW02-WG18	1/26/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	-	-	-	0.247		< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U
	RHMWA01-WG18	1/26/2010*	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	-	-	-	0.231		< 0.0340	U	< 0.0340	U	< 0.034			

Well Name	Sample ID	Date Sampled	8270C																		6020		6010B/6020/200.8									
			Benzo[a]pyrene		Benzo[b]fluoranthene		Benzo[k]fluoranthene		Chrysene		Dibenzo[a,h]anthracene		Fluoranthene		Fluorene		Indeno[1,2,3-cd]pyrene		1-Methylnaphthalene		2-Methylnaphthalene		Naphthalene		Phenanthrene		Pyrene		Dissolved Lead (filtered)		Total Lead (unfiltered)	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)	
For wells > 150 m from surface water	-	-																														
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.20		0.092		0.40		1.0		0.0092		130		240		0.092		4.7		10		17		240		68		15		-	
RHMW02 104.76' TOC ELEV	RHMW02W01	9/20/2005 ^b	< 0.10	U	< 0.052	U	< 0.10	U	< 0.10	U	< 0.052	U	< 0.26	U	< 0.26	U	< 0.052	U	104		88.5		120		< 0.52	U	< 0.26	U	< 5	U	< 5 ^g	U
	RHMW02Q01	9/20/2005 ^{ab}	< 0.10	U	0.069	J	< 0.10	U	< 0.10	U	< 0.052	U	< 0.26	U	< 0.26	U	< 0.052	U	102		87.2		123		< 0.52	U	< 0.26	U	< 5	U	< 5 ^g	U
	RHMW02-GW02	7/10/2006 ^a	< 0.11	U	-		-		-		-		< 0.27	U	0.33	J	-		142		65.8		171		-		-		< 1.7	U	< 10 ⁹	U
	RHMW05-GW02	7/10/2006 ^{ab}	< 0.10	U	-		-		-		-		< 0.25	U	0.32	J	-		133		67.1		180		-		-		< 1.7	U	< 10 ⁹	U
	RHMW02-GW06	12/5/2006 ^a	< 0.097	U	-		-		-		-		< 0.24	U	0.34	J	-		124		45.1		160		-		-		< 1.7	U	-	
	RHMWA01-GW06	12/5/2006 ^{ab}	< 0.096	U	-		-		-		-		< 0.24	U	0.35	J	-		114		51.1		147		-		-		< 1.7	U	-	
	RHMW02-WG07	3/27/2007 ^{ab}	< 0.096	U	< 0.048	U	< 0.096	U	< 0.096	U	< 0.048	U	< 0.24	U	0.26	J	< 0.048	U	72.1	O	30.3	O	105	O	< 0.48	U	< 0.24	U	1.7	J	-	
	RHMWA01-WG07	3/27/2007 ^{ab}	< 0.096	U	< 0.048	U	< 0.096	U	< 0.096	U	< 0.048	U	< 0.24	U	0.26	J	< 0.048	U	59.4	O	26.2	O	90.1	O	< 0.48	U	< 0.24	U	1.7	J	-	
	RHMW02-WG08	6/12/2007 ^a	< 0.098	U	< 0.049	U	< 0.098	U	< 0.098	U	< 0.049	U	< 0.25	U	0.31	J	< 0.049	U	67.3		26.5		87.2		< 0.49	U	< 0.25	U	< 3.4	U	-	
	RHMWA01-WG08	6/12/2007 ^{ab}	< 0.098	U	< 0.049	U	< 0.098	U	< 0.098	U	< 0.049	U	< 0.25	U	0.37	J	< 0.049	U	88.3		33		128		< 0.49	U	< 0.25	U	< 3.4	U	-	
	RHMW02-WG09	9/10/2007 ^a	< 0.1	U	< 0.05	U	< 0.1	U	< 0.1	U	< 0.05	U	< 0.25	U	0.39	J	< 0.05	U	109		21.5		144		< 0.5	U	< 0.25	U	< 2.1	U	-	
	RHMWA01-WG09	9/10/2007 ^{ab}	< 0.1	U	< 0.05	U	< 0.1	U	< 0.1	U	< 0.05	U	< 0.25	U	0.34	J	< 0.05	U	102		19.7		136		< 0.5	U	< 0.25	U	< 2.1	U	-	
	RHMW02-WG10	1/15/2008 ^a	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	0.161		< 0.0158	U	67.0		23.8		93.6		< 0.0158	U	< 0.0158	U	< 0.310	U	-	
	RHMWA01-WG10	1/15/2008 ^{ab}	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	0.161		< 0.0155	U	73.2		27.6		102		< 0.0155	U	< 0.0155	U	< 0.310	U	-	
	RHMW02-WG11	4/15/2008 ^a	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	0.220		< 0.0155	U	75.8		34.5		73.0		< 0.0155	U	< 0.0155	U	< 0.310	U	-	
	RHMWA01-WG11	4/15/2008 ^{ab}	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	0.187		< 0.0155	U	71.9		40.8		105		< 0.0155	U	< 0.0155	U	< 0.310	U	-	
	RHMW02-WG12	7/29/2008 ^a	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U	0.324	J	< 0.155	U	102		31.5		140		< 0.155	U	< 0.155	U	< 0.310	U	-	
	RHMWA01-WG12	7/29/2008 ^{ab}	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U	< 0.155	U	0.304	J	< 0.155	U	96.0		42.2		132		< 0.155	U	< 0.155	U	< 0.310	U	-	
	RHMW02-WG13	10/22/2008 ^b	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	0.214		< 0.0156	U	72.1		13.7		97.4		< 0.0156	U	< 0.0156	U	< 0.310	U	-	
	RHMWA01-WG13	10/22/2008 ^{ab}	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.122		< 0.0150	U	62.4		12.7		82.3		< 0.0150	U	< 0.0150	U	< 0.310	U	-	
	RHMW02-WG14	2/4/2009 ^a	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U	< 0.161	U	21.2		10.5		15.2		< 0.161	U	< 0.161	U	< 0.310	U	-	
	RHMWA01-WG14	2/4/2009 ^{ab}	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U	< 0.0163	U	22.8		11.1		16.6		< 0.0163	U	< 0.0163	U	< 0.310	U	-	
	RHMW02-WG15	5/13/2009 ^a	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	17.9		0.136		1.17		0.0162	J	< 0.0150	U	< 0.310	U	-	
	RHMWA01-WG15	5/13/2009 ^{ab}	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	24.6		0.107		1.08		0.0171	J	< 0.0155	U	< 0.310	U	-	
	RHMW02-WG16	7/15/2009 ^a	< 0.0156	U	< 0.0156	U	< 0.0156	U	0.0162	J	< 0.0156	U	0.0247	J	0.115		< 0.0156	U	13.2		3.66		8.37		0.0304	J	0.0272	J	< 0.310	U	-	
	RHMWA01-WG16	7/15/2009 ^{ab}	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	0.0199	J	0.108		< 0.0165	U	10.6		2.58		6.71		0.0291	J	0.0189	J	< 0.310	U	-	
	RHMW02	10/13/2009 ^{ab}	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	0.0979		< 0.017	U	2.46		0.486		6.77		< 0.017	U	< 0.017	U	< 0.31	U	-	
	RHMWA01-WG17	10/13/2009 ^{ab}	< 0.0179	U	< 0.0179	U	< 0.0179	U	< 0.0179	U	< 0.0179	U	< 0.0179	U	0.0.																	

Well Name	Sample ID	Date Sampled	8015														8260B																								
			TPH-d		TPH-g		TPH-o		TPH-g			1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)		1,4-Dichlorobenzene		Acetone	
			(µg/l)		(µg/l)			(µg/l)			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		
For wells > 150 m from surface water	-	-																																							
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	100		100		100		100		200		5.0		2.4		7.0		0.6		70		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500		
RHMW02 104.76' TOC ELEV	ES020	4/22/2013	2,600	HD	-	-		54		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U		
	ES021	4/22/2013*	3,300	HD	-	-		56		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	I,J,ICH,U		
	ES029	7/22/2013	2,500	HD	-	-		55		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U		
	ES030	7/22/2013*	2,600	HD	-	-		61		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U		
	ES038	10/21/2013	2,400	HD	-	-		48	B,J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES039	10/21/2013*	2,400	HD	-	-		63	B	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES046	1/15/2014	5,000		-	-		-		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES047	1/15/2014*	5,200		-	-		-		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES057	1/28/2014	2,300	HD	-	-		50	B	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U		
	ES058	1/28/2014*	2,100	HD	-	-		52	B	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U		
	ES063	2/24/2014	2,200	HD	-	-		40	J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U		
	ES065	3/5/2014	2,100		-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES066	3/5/2014*	2,200		-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES070	3/10/2014	930		-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES071	3/10/2014*	890		-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES073	3/25/2014	1,700	HD	-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES074	3/25/2014*	1,700	HD	-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES078	4/7/2014	3,500	HD	-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES079	4/7/2014*	3,300	HD	-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES081	4/21/2014	1,900		-	-		53		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES082	4/21/2014*	1,500		-	-		50		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES092	5/27/2014	1,500	HD	-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES093	5/27/2014*	1,300	HD	-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES099	6/23/2014	1,800		-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES100	6/23/2014*	1,600		-	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES104	7/21/2014	1,200	HD	-	-		48	J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES105	7/21/2014*	1,300	HD	-	-		49	J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES114	10/27/2014	2,000	J,HD	-	-		57		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U,IH	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES115	10/27/2014	2,000	J,HD	-	-		53		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U,IH	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH		
	ES126	1/28/2015	1,100	HD	-	-		54		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,I,J		
	ES127	1/28/2015*	1,700	HD	-	-		59		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,I,J		
	ES131	4/20/2015	5,200	Y	46	J	360	L	-	<0.20	U	<0.40	U	<0.20	U	<0.20	U	<0.50	U	<0.30	U	<0.80	U	<0.20	U	<0.20	U	-		<0.20	U	<0.20	U	<0.20	U	<0.20	U	<10	U		
	ES132	4/20/2015*	5,400	Y	47	J	360	L	-	<0.20	U	<0.40	U	<0.20	U	<0.20	U	<0.50	U	<0.30	U	<0.80	U	<0.20	U	<0.20	U	-		<0.20	U	<0.20	U	<0.20	U	<0.20	U	<10	U		

Well Name	Sample ID	Date Sampled	8260B																																										
			Benzene		Bromodichloromethane		Bromoform		Bromomethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethylene		Dibromochloromethane		Ethylbenzene		Hexachlorobutadiene		Methyl ethyl ketone (2-Butanone)			Methyl isobutyl ketone (4 Methyl-2-Pentanone)		Methyl tert-butyl Ether			Methylene chloride		Naphthalene			Styrene		Tetrachloroethane, 1,1,1,2-	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)			(µg/l)	(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		
For wells > 150 m from surface water	-	-																																											
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	5.0		0.12		80		8.7		5.0		50		16		70		1.8		70		0.16		30		0.86		7,100			170		5.0		4.8		17		10		0.52			
RHMW02 104.76' TOC ELEV	ES020	4/22/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.21	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES021	4/22/2013*	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.21	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES029	7/22/2013	< 0.50 ¹	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.17 ¹	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES030	7/22/2013*	< 0.50 ¹	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.19 ¹	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES038	10/21/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,IJ	< 0.50	U	< 0.50	U	0.14	J	< 0.50	U	< 5.0	U,I	ICH	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U		
	ES039	10/21/2013*	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,IJ	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U,I	ICH	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U		
	ES046	1/15/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I	ICJ	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.17	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U		
	ES047	1/15/2014*	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I	ICJ	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.17	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U		
	ES057	1/28/2014	0.14	J	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.20	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES058	1/28/2014*	0.15	J	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.20	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES063	2/24/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,IJ	< 0.50	U	< 0.50	U	0.15	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES065	3/5/2014	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.15	J	-		-		-		-		-		-		-		-		-		
	ES066	3/5/2014*	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.15	J	-		-		-		-		-		-		-		-		-		
	ES070	3/10/2014	< 0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		
	ES071	3/10/2014*	< 0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		
	ES073	3/25/2014	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.15	J	-		-		-		-		-		-		-		-		-		
	ES074	3/25/2014*	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.16	J	-		-		-		-		-		-		-		-		-		
	ES078	4/7/2014	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.18	J	-		-		-		-		-		-		-		-		-		
	ES079	4/7/2014*	< 0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		
	ES081	4/21/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I	ICJ	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.17	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U		
	ES082	4/21/2014*	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I	ICJ	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	0.16	J	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U		
	ES092	5/27/2014	< 0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		
	ES093	5/27/2014*	< 0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		
	ES099	6/23/2014	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.16	J	-		-		-		-		-		-		-		-		-		
	ES100	6/23/2014*	< 0.50	U	-		-		-		-		-		-		-		-		-		-		0.18	J	-		-		-		-		-		-		-		-		-		
	ES104	7/21/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,IJ	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U			
	ES105	7/21/2014*	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	<																																

Well Name	Sample ID	Date Sampled	8260B										8260SIM							8011			8270C						
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene	Toluene	trans-1,2- Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes, Total (p/m-, o- xylene)	1,2-Dibromoethane	1,2-Dichloroethane	Bromodichloromethane	Dibromochloromethane	Tetrachloroethane, 1,1,2,2-	1,2-Dibromo-3- chloropropane	1,2-Dibromoethane	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[g,h,i]perylene								
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)								
For wells > 150 m from surface water	-	-																											
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.067	5.0	40	100	5.0	2.0	20	0.04	0.15	0.12	0.16	0.067	0.04	0.04	20	240	22	0.092	0.13								
RHMW02 104.76' TOC ELEV	ES020	4/22/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.58	J	-	-	-	-	-	-	0.58	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U		
	ES021	4/22/2013*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.58	J	-	-	-	-	-	-	0.65	< 0.048	U	< 0.048	U	< 0.048	U	< 0.048	U		
	ES029	7/22/2013	< 0.50	U	< 0.50	U	< 0.50 ¹	U	< 0.50	U	0.45 ¹	J	-	-	-	-	-	-	0.52	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES030	7/22/2013*	< 0.50	U	< 0.50	U	< 0.50 ¹	U	< 0.50	U	0.50 ¹	J	-	-	-	-	-	-	0.51	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES038	10/21/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.37	J	-	-	-	-	-	-	0.54	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U		
	ES039	10/21/2013*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.37	J	-	-	-	-	-	-	0.57	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U		
	ES046	1/15/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.48	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES047	1/15/2014*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.45	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES057	1/28/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.38	J	-	-	-	-	-	-	0.37	<0.049	U	<0.049	U	<0.049	U	<0.049	U		
	ES058	1/28/2014*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.34	J	-	-	-	-	-	-	0.32	<0.050	U	<0.050	U	<0.050	U	<0.050	U		
	ES063	2/24/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.29	J	-	-	-	-	-	-	0.32	<0.050	U	<0.050	U	<0.050	U	<0.050	U		
	ES065	3/5/2014	-	-	< 0.50	U	-	-	-	0.29	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES066	3/5/2014*	-	-	< 0.50	U	-	-	-	0.32	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES070	3/10/2014	-	-	< 0.50	U	-	-	-	0.30	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES071	3/10/2014*	-	-	< 0.50	U	-	-	-	0.31	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES073	3/25/2014	-	-	< 0.50	U	-	-	-	0.38	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES074	3/25/2014*	-	-	< 0.50	U	-	-	-	0.41	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES078	4/7/2014	-	-	< 0.50	U	-	-	-	0.40	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES079	4/7/2014*	-	-	< 0.50	U	-	-	-	0.33	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES081	4/21/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.43	J	-	-	-	-	-	-	0.47	<0.051	U	<0.051	U	<0.051	U	<0.051	U		
	ES082	4/21/2014*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.42	J	-	-	-	-	-	-	0.49	<0.050	U	<0.050	U	<0.050	U	<0.050	U		
	ES092	5/27/2014	-	-	< 0.50	U	-	-	-	0.31	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES093	5/27/2014*	-	-	< 0.50	U	-	-	-	0.32	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES099	6/23/2014	-	-	< 0.50	U	-	-	-	0.40	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES100	6/23/2014*	-	-	< 0.50	U	-	-	-	0.37	J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES104	7/21/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.36	J	-	-	-	-	-	-	0.52	<0.048	U	<0.048	U	<0.048	U	<0.048	U		
	ES105	7/21/2014*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.33	J	-	-	-	-	-	-	0.50	<0.051	U	<0.051	U	<0.051	U	<0.051	U		
	ES114	10/27/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.32	J	-	-	-	-	-	-	0.53	<0.047	U	<0.047	U	<0.047	U	<0.047	U		
	ES115	10/27/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.29	J	-	-	-	-	-	-	0.53	<0.047	U	<0.047	U	<0.047	U	<0.047	U		
	ES126	1/28/2015	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.35	J	-	-	-	-	-	-	0.59	<0.050	U	<0.050	U	<0.050	U	<0.050	U		
	ES127	1/28/2015*	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	0.35	J	-	-	-	-	-	-	0.55	<0.049	U	<0.049	U	<0.049	U	<0.049	U		
	ES131	4/20/2015	-	<0.20	U	<0.10	U	<0.20	U	<0.10	U	0.26	J	<0.010	U	<0.015	U	<0.010	U	0.24	0.10	X	<0.0050	U	0.0047	B,J	<0.0050	U	
	ES132	4/20/2015*	-	<0.20	U	<0.10	U	<0.20	U	<0.10	U	0.30	J	<0.010	U	<0.015	U	<0.010	U	0.51	0.26	X	<0.0050	U	0.0030	B,J	<0.0050	U	

Well Name	Sample ID	Date Sampled	8270C																		6020	6010B/6020/200.8						
			Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Dissolved Lead (filtered)	Total Lead (unfiltered)											
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)											
For wells > 150 m from surface water	-	-																										
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.20	0.092	0.40	1.0	0.0092	130	240	0.092	4.7	10	17	240	68	15		-										
RHMW02 104.76' TOC ELEV	ES020	4/22/2013	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	0.24	< 0.051	U	16	13	53	< 0.051	U	< 0.051	U	< 0.200	U	-					
	ES021	4/22/2013*	< 0.048	U	< 0.048	U	< 0.048	U	< 0.048	U	0.28	< 0.048	U	20	16	61	< 0.048	U	< 0.048	U	< 0.200	U	-					
	ES029	7/22/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.23	< 0.050	U	21	9.1	73	< 0.050	U	< 0.050	U	0.135	J	-					
	ES030	7/22/2013*	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.22	< 0.050	U	18	6.6	67	< 0.050	U	< 0.050	U	< 0.200	U	-					
	ES038	10/21/2013	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	0.27	< 0.053	U	9.0	9.0	30	< 0.053	U	< 0.053	U	< 0.200	U	-					
	ES039	10/21/2013*	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	0.31	< 0.052	U	7.5	7.5	25	< 0.052	U	< 0.052	U	< 0.200	U	-					
	ES046	1/15/2014	-	-	-	-	-	-	-	-	-	-	-	6.0	4.9	18	-	-	-	-	-	-	-					
	ES047	1/15/2014*	-	-	-	-	-	-	-	-	-	-	-	5.3	4.3	17	-	-	-	-	-	-	-					
	ES057	1/28/2014	<0.049	U	<0.049	U	<0.049	U	<0.049	U	0.19	J	<0.049	U	8.8	5.4	18	<0.049	U	<0.049	U	<0.200	U	-				
	ES058	1/28/2014*	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.17	J	<0.050	U	9.0	5.9	18	<0.050	U	<0.050	U	<0.200	U	-				
	ES063	2/24/2014	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.19	J	<0.050	U	5.2	2.5	15	<0.050	U	<0.050	U	<0.200	U	-				
	ES065	3/5/2014	-	-	-	-	-	-	-	-	-	-	-	2.6	1.5	10	-	-	-	-	<0.200	U	-					
	ES066	3/5/2014*	-	-	-	-	-	-	-	-	-	-	-	3.9	2.9	13	-	-	-	-	<0.200	U	-					
	ES070	3/10/2014	-	-	-	-	-	-	-	-	-	-	-	3.7	2.5	11	-	-	-	-	<0.200	U	-					
	ES071	3/10/2014*	-	-	-	-	-	-	-	-	-	-	-	4.2	3.0	12	-	-	-	-	<0.200	U	-					
	ES073	3/25/2014	-	-	-	-	-	-	-	-	-	-	-	9.0	4.9	33	-	-	-	-	<0.200	U	-					
	ES074	3/25/2014*	-	-	-	-	-	-	-	-	-	-	-	8.1	4.0	33	-	-	-	-	0.116	J	-					
	ES078	4/7/2014	-	-	-	-	-	-	-	-	-	-	-	6.2	4.4	25	-	-	-	-	0.200	J	-					
	ES079	4/7/2014*	-	-	-	-	-	-	-	-	-	-	-	9.0	7.6	31	-	-	-	-	<0.200	U	-					
	ES081	4/21/2014	<0.051	U	<0.051	U	<0.051	U	<0.051	U	0.22	<0.051	U	8.7	8.1	31	<0.051	U	<0.051	U	<0.200	U	-					
	ES082	4/21/2014*	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.23	<0.050	U	8.3	7.7	32	<0.050	U	<0.050	U	<0.200	U	-					
	ES092	5/27/2014	-	-	-	-	-	-	-	-	-	-	-	9.3	2.7	34	-	-	-	-	<0.200	U	-					
	ES093	5/27/2014*	-	-	-	-	-	-	-	-	-	-	-	7.8	1.5	28	-	-	-	-	0.418	J	-					
	ES099	6/23/2014	-	-	-	-	-	-	-	-	-	-	-	11	3.4	38	-	-	-	-	0.149	J	-					
	ES100	6/23/2014*	-	-	-	-	-	-	-	-	-	-	-	12	4.5	41	-	-	-	-	<0.200	U	-					
	ES104	7/21/2014	<0.048	U	<0.048	U	<0.048	U	<0.048	U	0.24	<0.048	U	25	20	71	<0.048	U	<0.048	U	<0.200	U	-					
	ES105	7/21/2014*	<0.051	U	<0.051	U	<0.051	U	<0.051	U	0.23	<0.051	U	26	22	76	<0.051	U	<0.051	U	0.170	J	-					
	ES114	10/27/2014	<0.047	U	<0.047	U	<0.047	U	<0.047	U	<0.047	U	<0.047	U	59	43	140	<0.047	U	<0.047	U	<0.200	U	-				
	ES115	10/27/2014	<0.047	U	<0.047	U	<0.047	U	<0.047	U	<0.047	U	<0.047	U	54	36	130	<0.047	U	<0.047	U	0.165	J	-				
	ES126	1/28/2015	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.30	<0.050	U	34	7.6	J	90	<0.050	U	<0.050	U	<0.200	U	-				
	ES127	1/28/2015*	<0.049	U	<0.049	U	<0.049	U	<0.049	U	0.22	<0.049	U	25	2.7	J	63	<0.049	U	<0.049	U	<0.200	U	-				
	ES131	4/20/2015	<0.0050	U	<0.0050	U	<0.0050	U	<0.0050	U	<0.020	U	0.14	<0.0050	U	31	JD	15	JD	39	JD	<0.0050	U	0.0058	JX	0.016	J	-
	ES132	4/20/2015*	<0.0050	U	<0.0050	U	<0.0050	U	<0.0050	U	<0.020	U	0.31	<0.0050	U	68	JD	37	JD	140	JD	<0.0050	U	<0.010	U	0.025		-

Well Name	Sample ID	Date Sampled	8015														8260B																									
			TPH-d		TPH-g		TPH-o		TPH-g			1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)		1,4-Dichlorobenzene		Acetone		
			(µg/l)		(µg/l)				(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)			
For wells > 150 m from surface water	-	-																																								
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	100		100		100		100		200		5.0		2.4		7.0		0.6		70		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500			
RHMW03 121.06' TOC ELEV	RHMW03GW01	9/21/2005 ^b	162	J	< 0.50	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	RHMW03-GW02	7/10/2006 nd	142	J	< 50	U	-		-		< 0.50	U	-		-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-			
	RHMW03-GW06	12/5/2006 nd	< 100	U	< 50	U	-		-		< 0.50	U	-		-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-			
	RHMW03-WG07	3/27/2007 ^a	95.7	J	< 50	U	-		-		< 0.5	U	< 0.5	U	-		-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-	U	< 0.5	U	< 5	U		
	RHMW03-WG08	6/12/2007 ^a	123	J	< 50	U	-		-		< 0.5	U	< 0.5	U	-		-		-		-		< 0.5	U	< 1	U	-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5	U		
	RHMW03-WG09	9/10/2007 ^a	< 96	U	< 50	U	-		-		<0.29	U	< 0.3	U	-		-		-		-		< 0.22	U	< 0.41	U	-		-		< 0.25	U	< 0.23	U	-		< 0.22	U	< 10	U		
	RHMW03-WG10	1/15/2008 ^a	242	J	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	-	
	RHMW03-WG11	4/15/2008 ^a	190	J	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U
	RHMW03-WG12	7/29/2008 ^a	199	J	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U
	RHMW03-WG13	10/22/2008 ^a	244	J	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U
	RHMW03-WG14	2/4/2009 ^a	207	J	16.1	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U
	RHMW03-WG15	5/13/2009 ^a	< 161	U	14.8	J	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U
	RHMW03-WG16	7/15/2009 ^a	< 150	U	< 30.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U
	RHMW03-WG17	10/14/2009 ^a	< 163	U	< 30	U	-		-		< 0.31	U	< 0.31	U	< 0.31	U	-		< 0.31	U	< 0.31	U	< 0.62	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.15	U	< 0.15	U	< 3.1	U
	RHMW03-WG18	1/27/2010	< 330	U	< 60.0	U	-		-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	< 6.20	U
	RHMW03-WG19	4/13/2010	< 320	U	< 60.0	U	-		-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	< 6.20	U
	RHMW03-WG20	7/13/2010	< 324	U	< 60.0	U	-		-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	-	
	ES001	10/18/2010	330	++	-		-		< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U		
	ES012	1/19/2011	< 80.8	U	-		-		< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U		
	ES025	4/20/2011	< 80.8	U	-		-		< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U		
	ES035	7/19/2011	< 80.8	U	-		< 212.0	U	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U		
	ES049	10/24/2011	< 80.8	U	-		-		< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U		
	ES060	1/26/2012	< 80.8	U	-		-		< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	<			

Well Name	Sample ID	Date Sampled	8260B																					
			Benzene		Bromodichloromethane		Bromoform		Bromomethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethylene		Dibromochloromethane	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)	
For wells > 150 m from surface water	-	-																						
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	5.0		0.12		80		8.7		5.0		50		16		70		1.8		70		0.16	
RHMW03 121.06' TOC ELEV	RHMW03GW01	9/21/2005 ⁵	< 0.50	U	-		-		-		-		-		-		-		-		-		-	
	RHMW03-GW02	7/10/2006 ^{9H}	< 0.50	U	-		-		-		-		-		-		-		-		-		-	
	RHMW03-GW06	12/5/2006 ^{9H}	< 0.50	U	-		-		-		-		-		-		-		-		-		-	
	RHMW03-WG07	3/27/2007 ⁹	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-	
	RHMW03-WG08	6/12/2007 ⁹	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U
	RHMW03-WG09	9/10/2007 ⁹	< 0.2	U	< 0.29	U	< 0.28	U	< 0.54	U	< 0.29	U	< 0.2	U	< 0.46	U	< 0.21	U	< 0.38	U	< 0.28	U	-	
	RHMW03-WG10	1/15/2008 ⁹	< 0.120	U	< 0.150	U	< 0.500	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG11	4/15/2008 ⁹	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG12	7/29/2008 ⁹	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG13	10/22/2008 ⁹	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG14	2/4/2009 ⁹	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG15	5/13/2009 ⁹	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG16	7/15/2009 ⁹	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW03-WG17	10/14/2009 ⁹	< 0.12	U	< 0.15	U	< 0.31	U	< 0.94	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.3	U	< 0.31	U	< 0.31	U	< 0.15	U
	RHMW03-WG18	1/27/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U
	RHMW03-WG19	4/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U
	RHMW03-WG20	7/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U
	ES001	10/18/2010	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES012	1/19/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES025	4/20/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES035	7/19/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES049	10/24/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U
	ES060	1/26/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U
	ES073	4/16/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U
	ES081	7/18/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U
	ES004	10/22/2012	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 5.0	IH,U	< 0.50	U	< 0.50	U
	ES013	1/28/2013	< 0.50	U	< 0.50	U	< 2.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES022	4/22/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES031	7/22/2013	< 0.50 ^I	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES040	10/21/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U
	ES059	1/28/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES083	4/21/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I,C,J	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES106	7/22/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U
	ES116	10/27/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U
	ES123	1/28/2015	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I,H	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES133	4/20/2015	<0.10	U	-		<0.50	U	<0.30	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U	-	

Well Name	Sample ID	Date Sampled	8260B										8260SIM						8011			8270C							
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes, Total (p/m-, o-xylene)	1,2-Dibromoethane	1,2-Dichloroethane	Bromodichloromethane	Dibromochloromethane	Tetrachloroethane, 1,1,2,2-	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[g,h,i]perylene								
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)								
For wells > 150 m from surface water	-	-																											
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.067	5.0	40	100	5.0	2.0	20	0.04	0.15	0.12	0.16	0.067	0.04	0.04	20	240	22	0.092	0.13								
RHMW03 121.06' TOC ELEV	RHMW03GW01	9/21/2005 ²	-	-	< 0.50	U	-	< 0.50	U	-	< 0.50	U	-	-	-	-	-	< 0.48	U	< 0.48	U	< 0.48	U	< 0.48	U	< 0.096	U		
	RHMW03-GW02	7/10/2006 ^{3H}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	< 0.50	U	-	-	-	-	-	-	-	-		
	RHMW03-GW06	12/5/2006 ^{3H}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	< 0.49	U	-	-	-	-	-	-	-	-		
	RHMW03-WG07	3/27/2007 ³	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	< 0.49	U	< 0.49	U	< 0.49	U	-	< 0.098	U			
	RHMW03-WG08	6/12/2007 ³	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	-	< 0.5	U	< 0.5	U	< 0.5	U	-	< 0.099	U			
	RHMW03-WG09	9/10/2007 ³	< 0.37	U	< 0.25	U	< 0.27	U	< 0.2	U	< 0.38	U	< 0.34	U	< 0.36	U	-	< 0.5	U	< 0.5	U	< 0.5	U	-	< 0.1	U			
	RHMW03-WG10	1/15/2008 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U		
	RHMW03-WG11	4/15/2008 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U		
	RHMW03-WG12	7/29/2008 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U		
	RHMW03-WG13	10/22/2008 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U		
	RHMW03-WG14	2/4/2009 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U		
	RHMW03-WG15	5/13/2009 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U		
	RHMW03-WG16	7/15/2009 ³	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U		
	RHMW03-WG17	10/14/2009 ³	< 0.15	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 1	U	-	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U		
	RHMW03-WG18	1/27/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U		
	RHMW03-WG19	4/13/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U		
	RHMW03-WG20	7/13/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U		
	ES001	10/18/2010	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES012	1/19/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES025	4/20/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES035	7/19/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES049	10/24/2011	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES060	1/26/2012	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES073	4/16/2012	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES081	7/18/2012	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
	ES004	10/22/2012	< 0.50	U	< 0.50	U	0.54	J	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES013	1/28/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES022	4/22/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U		
	ES031	7/22/2013	< 0.50	U	< 0.50	U	< 0.50 ¹	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0 ¹	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES040	10/21/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES059	1/28/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
	ES083	4/21/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.049	U	< 0.049	U	< 0.049	U	< 0.049	U	< 0.049	U		
	ES106	7/22/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.047	U	< 0.047	U	< 0.047	U	< 0.047	U	< 0.047	U		
	ES116	10/27/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.054	U	< 0.054	U	< 0.054	U	< 0.054	U	< 0.11	U		
	ES123	1/28/2015	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	-	< 0.048	U	< 0.048	U	< 0.048	U	< 0.048	U	< 0.097	U		
	ES133	4/20/2015	-	< 0.20	U	< 0.10	U	< 0.20	U	< 0.10	U	< 0.10	U	< 0.010	U	< 0.015	U	< 0.0053	U	< 0.0053	U	< 0.0053	U	0.0037	B,J	< 0.0053	U		

Well Name	Sample ID	Date Sampled	8270C																	6020	6010B/6020/200.8											
			Benzo[a]pyrene		Benzo[b]fluoranthene		Benzo[k]fluoranthene		Chrysene		Dibenzo[a,h]anthracene		Fluoranthene		Fluorene		Indeno[1,2,3-cd]pyrene		1-Methylnaphthalene		2-Methylnaphthalene		Naphthalene		Phenanthrene		Pyrene		Dissolved Lead (filtered)		Total Lead (unfiltered)	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)	
For wells > 150 m from surface water	-	-																														
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.20		0.092		0.40		1.0		0.0092		130		240		0.092		4.7		10		17		240		68		15		-	
RHMW03 121.06' TOC ELEV	RHMW03GW01	9/21/2005 ^b	< 0.096	U	< 0.048	U	< 0.096	U	< 0.096	U	< 0.048	U	< 0.24	U	< 0.24	U	< 0.048	U	< 0.24	U	< 0.24	U	< 0.24	U	< 0.48	U	< 0.24	U	< 5	U	8.5 ^g	
	RHMW03-GW02	7/10/2006 nd	< 0.10	U	-		-		-		-		< 0.25	U	-		-		-		-		< 0.25	U	-		-		< 1.7	U	-	
	RHMW03-GW06	12/5/2006 nd	< 0.098	U	-		-		-		-		< 0.25	U	-		-		-		-		< 0.25	U	-		-		< 1.7	U	-	
	RHMW03-WG07	3/27/2007 th	< 0.098	U	< 0.049	U	< 0.098	U	< 0.098	U	< 0.049	U	< 0.25	U	< 0.25	U	< 0.049	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.49	U	< 0.25	U	3.0	J	-	
	RHMW03-WG08	6/12/2007 th	< 0.099	U	< 0.05	U	< 0.099	U	< 0.099	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 3.4	U	-	
	RHMW03-WG09	9/10/2007 th	< 0.1	U	< 0.05	U	< 0.1	U	< 0.1	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 2.1	U	-	
	RHMW03-WG10	1/15/2008 th	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0323	U	< 0.0156	U	< 0.0156	U	< 0.310	U	-	
	RHMW03-WG11	4/15/2008 th	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	0.0268	J	0.0279	J	< 0.0341	U	< 0.0165	U	< 0.0165	U	< 0.310	U	-	
	RHMW03-WG12	7/29/2008 th	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	0.0294	J	< 0.0156	U	0.0689	J	< 0.0156	U	< 0.0156	U	< 0.310	U	-	
	RHMW03-WG13	10/22/2008 th	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	< 0.0155	U	0.0658		0.0937		0.219		< 0.0155	U	< 0.0155	U	< 0.310	U	-	
	RHMW03-WG14	2/4/2009 th	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0333	U	< 0.0161	U	< 0.0161	U	< 0.310	U	-	
	RHMW03-WG15	5/13/2009 th	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0152	U	< 0.0313	U	< 0.0152	U	< 0.0152	U	< 0.310	U	-	
	RHMW03-WG16	7/15/2009 th	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0158	U	< 0.0326	U	< 0.0158	U	< 0.0158	U	< 0.310	U	-	
	RHMW03-WG17	10/14/2009 th	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0169	U	< 0.0348	U	< 0.0169	U	< 0.0169	U	< 0.31	U	-	
	RHMW03-WG18	1/27/2010	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0666	U	< 0.0322	U	< 0.0322	U	< 0.620	U	-	
	RHMW03-WG19	4/13/2010	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0666	U	< 0.0322	U	< 0.0322	U	< 0.620	U	-	
	RHMW03-WG20	7/13/2010	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0322	U	< 0.0666	U	< 0.0322	U	< 0.0322	U	< 0.620	U	-	
	ES001	10/18/2010	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	0.28	J	-	
	ES012	1/19/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES025	4/20/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES035	7/19/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	0.33	J	-	
	ES049	10/24/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	0.22	J	-	
	ES060	1/26/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	0.14	J	-	
	ES073	4/16/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	1.4		-	
	ES081	7/18/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES004	10/22/2012	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.029	J	< 0.050	U	< 0.050	U	< 0.200	U	-	
	ES013	1/28/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.10	J	0.069	J	0.32		< 0.050	U	< 0.050	U	< 0.200	U	-	
	ES022	4/22/2013	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.053	U	< 0.200	U	-	
	ES031	7/22/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.064	J	< 0.050	U	< 0.050	U	< 0.200	U	-	
	ES040	10/21/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	&																			

Well Name	Sample ID	Date Sampled	8015															8260B																													
			TPH-d		TPH-g		TPH-o		TPH-g			1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene			1,2-Dibromo-3-chloropropane			1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane			1,2-Dichloropropane			1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)			1,4-Dichlorobenzene			Acetone	
			(µg/l)		(µg/l)				(µg/l)			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)			
For wells > 150 m from surface water	-	-																																													
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	100		100		100		100		200		5.0		2.4		7.0		0.6		70		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500								
RHMW05 101.55' TOC ELEV	RHMW05-WG15	5/13/2009 ^a	200	J	13.2	J	-	-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	10.4									
	RHMW05-WG16	7/15/2009 ^a	491		< 30.0	U	-	-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	65.0									
	RHMW05	10/13/2009 ^{a,d}	673		< 30	U	-	-		< 0.31	U	< 0.31	U	< 0.31	U	-		< 0.31	U	< 0.31	U	< 0.62	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.15	U	< 3.1	U								
	RHMW05-WG18	1/26/2010	2,060		< 60.0	U	-	-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	< 6.20	U						
	RHMW05-WG19	4/13/2010	< 300	U	< 60.0	U	-	-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	< 6.20	U						
	RHMW05-WG20	7/13/2010	< 320	U	< 60.0	U	-	-		< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.300	U	-							
	ES005	10/20/2010	< 80.8	U	-	-	-	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U								
	ES013	1/19/2011	< 80.8	U	-	-	-	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U								
	ES024	4/20/2011	< 80.8	U	-	-	-	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U								
	ES039	7/19/2011	< 80.8	U	-		< 212.0	U	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U							
	ES051	10/25/2011	< 80.8	U	-	-	-	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U								
	ES063	2/1/2012	< 80.8	U	-	-	-	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U								
	ES070	4/16/2012	< 80.8	U	-	-	-	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.36	U	< 0.38	U	< 1.90	U								
	ES079	7/17/2012	< 80.8	U	-		< 212.0	U	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.50	U	< 0.38	U	< 1.90	U							
	ES080	7/17/2012 ^a	< 80.8	U	-		< 212.0	U	< 12.12	U	< 0.28	U	< 0.40	U	< 0.38	U	< 0.60	U	< 0.78	U	< 0.42	U	< 1.52	U	< 0.40	U	< 0.34	U	< 0.28	U	< 0.34	U	< 0.22	U	< 0.50	U	< 0.38	U	< 1.90	U							
	ES005	10/22/2012	17	J,HD	-	-	-	15	B,J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U								
	ES015	1/29/2013	62	HD	-	-	-	< 30	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 2.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	IJ,ICH,U								
	ES024	4/23/2013	27	J	-	-	-	15	J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U								
	ES033	7/23/2013	< 20	U	-	-	-	< 30	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U								
	ES042	10/22/2013	< 20	U	-	-	-	17	B,J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH								
	ES049	1/16/2014	< 20	U	-	-	-	-		< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH								
	ES061	1/29/2014	16	J,HD	-	-	-	23	B,J	<0.50	U,IH	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,IH								
	ES068	3/6/2014	<21	U	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	ES076	3/26/2014	17	J,HD	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	ES084	4/22/2014	<10	U</																																											

Well Name	Sample ID	Date Sampled	8260B																																								
			Benzene		Bromodichloromethane		Bromoform		Bromomethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethylene		Dibromochloromethane		Ethylbenzene		Hexachlorobutadiene		Methyl ethyl ketone (2-Butanone)			Methyl isobutyl ketone (4 Methyl-2-Pentanone)		Methyl tert-butyl Ether		Methylene chloride		Naphthalene		Styrene		Tetrachloroethane, 1,1,1,2-	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		
For wells > 150 m from surface water	-	-																																									
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	5.0		0.12		80		8.7		5.0		50		16		70		1.8		70		0.16		30		0.86		7,100			170		5.0		4.8		17		10		0.52	
RHMW05 101.55' TOC ELEV	RHMW05-WG15	5/13/2009 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	< 0.620	U	< 0.310	U	< 0.150	U	
	RHMW05-WG16	7/15/2009 ^a	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 3.10	U	< 3.10	U	< 1.50	U	< 1.00	U	< 0.620	U	< 0.310	U	< 0.150	U	
	RHMW05	10/13/2009 ^{ad}	< 0.12	U	< 0.15	U	< 0.31	U	< 0.94	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.3	U	< 0.31	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.31	U	< 3.1	U	< 3.1	U	-		< 1	U	< 0.62	U	< 0.31	U	< 0.15	U	
	RHMW05-WG18	1/26/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 6.20	U	< 6.20	U	< 3.00	U	< 2.00	U	< 1.24	U	< 0.620	U	< 0.300	U	
	RHMW05-WG19	4/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 6.20	U	< 6.20	U	< 3.00	U	< 2.00	U	< 1.24	U	< 0.620	U	< 0.300	U	
	RHMW05-WG20	7/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.620	U	< 6.20	U	< 6.20	U	< 3.00	U	< 2.00	U	< 1.24	U	< 0.620	U	< 0.300	U	
	ES005	10/20/2010	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.38	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES013	1/19/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.38	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES024	4/20/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.38	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES039	7/19/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.38	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES051	10/25/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.52	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES063	2/1/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.52	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES070	4/16/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.52	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES079	7/17/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.52	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES080	7/17/2012*	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.38	U	< 0.46	U	< 0.38	U	< 1.20	U	< 3.80	U	< 0.52	U	< 0.70	U	-		< 0.50	U	< 0.26	U	
	ES005	10/22/2012	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 5.0	IH,U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U	
	ES015	1/29/2013	< 0.50	U	< 0.50	U	< 2.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 2.0	U	-		< 0.50	U	< 0.50	U	
	ES024	4/23/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U	
	ES033	7/23/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U	
	ES042	10/22/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,IJ	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U,ICH	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U	
	ES049	1/16/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,ICJ	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,IJ	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U,IJ	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U	
	ES061	1/29/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U,IH	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	<																

Well Name	Sample ID	Date Sampled	8260B										8260SIM						8011			8270C													
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes, Total (p/m-, o-xylene)	1,2-Dibromoethane	1,2-Dichloroethane	Bromodichloromethane	Dibromochloromethane	Tetrachloroethane, 1,1,2,2-	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	Acenaphthene	Acenaphthylene	Anthracene		Benzo[a]anthracene		Benzo[g,h,i]perylene												
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)										
For wells > 150 m from surface water	-	-																																	
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.067	5.0	40	100	5.0	2.0	20	0.04	0.15	0.12	0.16	0.067	0.04	0.04	20	240	22	0.092	0.13														
RHMW05 101.55' TOC ELEV	RHMW05-WG15	5/13/2009 ^a	< 0.150	U < 0.310	U < 0.310	U < 0.310	U < 0.310	U < 0.310	U < 0.620	U -	-	-	-	-	-	-	< 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U													
	RHMW05-WG16	7/15/2009 ^a	< 0.150	U < 0.310	U < 0.310	U < 0.310	U < 0.310	U < 0.310	U < 0.620	U -	-	-	-	-	-	-	< 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U													
	RHMW05	10/13/2009 ^{ad}	< 0.15	U < 0.31	U < 0.31	U < 0.31	U < 0.31	U < 0.31	U < 1	U -	-	-	-	-	-	-	< 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U													
	RHMW05-WG18	1/26/2010	< 0.300	U < 0.620	U < 0.620	U < 0.620	U < 0.620	U < 0.620	U < 1.24	U -	-	-	-	-	-	-	< 0.0344	U < 0.0344	U < 0.0344	U < 0.0344	U < 0.0344	U													
	RHMW05-WG19	4/13/2010	< 0.300	U < 0.620	U < 0.620	U < 0.620	U < 0.620	U < 0.620	U < 1.24	U -	-	-	-	-	-	-	< 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U													
	RHMW05-WG20	7/13/2010	< 0.300	U < 0.620	U < 0.620	U < 0.620	U < 0.620	U < 0.620	U < 1.24	U -	-	-	-	-	-	-	< 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U													
	ES005	10/20/2010	< 0.20	U < 0.30	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES013	1/19/2011	< 0.20	U < 0.30	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES024	4/20/2011	< 0.20	U < 0.30	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES039	7/19/2011	< 0.20	U < 0.30	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES051	10/25/2011	< 0.20	U < 0.48	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES063	2/1/2012	< 0.20	U < 0.48	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES070	4/16/2012	< 0.20	U < 0.48	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES079	7/17/2012	< 0.20	U < 0.48	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES080	7/17/2012*	< 0.20	U < 0.48	U < 0.34	U < 0.38	U < 0.32	U < 0.46	U < 0.38	U -	-	-	-	-	-	-	< 0.12	U < 0.12	U < 0.10	U < 0.14	U < 0.16	U													
	ES005	10/22/2012	< 0.50	U < 0.50	U 0.31	J < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U													
	ES015	1/29/2013	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U													
	ES024	4/23/2013	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U													
	ES033	7/23/2013	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U													
	ES042	10/22/2013	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U													
	ES049	1/16/2014	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	-	-	-	-	-														
	ES061	1/29/2014	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U													
	ES068	3/6/2014	-	-	< 0.50	U -	-	-	< 1.0	U -	-	-	-	-	-	-	-	-	-	-	-														
	ES076	3/26/2014	-	-	< 0.50	U -	-	-	< 1.0	U -	-	-	-	-	-	-	-	-	-	-	-														
	ES084	4/22/2014	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U													
	ES095	5/28/2014	-	-	< 0.50	U -	-	-	< 1.0	U -	-	-	-	-	-	-	-	-	-	-	-														
	ES101	6/24/2014	-	-	< 0.50	U -	-	-	< 1.0	U -	-	-	-	-	-	-	-	-	-	-	-														
	ES108	7/22/2014	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U													
	ES118	10/28/2014	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U													
	ES124	1/27/2015	< 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 0.50	U < 1.0	U -	-	-	-	-	-	-	< 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U													
	ES135	4/21/2015	-	< 0.20	U < 0.10	U < 0.20	U < 0.10	U < 0.10	U < 0.20	U < 0.010	U < 0.015	U < 0.010	U < 0.010	U < 0.015	U < 0.0040	U < 0.0040	U < 0.0050	U < 0.0050	U < 0.0050	U < 0.0050	U < 0.0050	U													

Well Name	Sample ID	Date Sampled	8270C																	6020	6010B/6020/200.8									
			Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Dissolved Lead (filtered)	Total Lead (unfiltered)													
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)													
For wells > 150 m from surface water	-	-																												
DOH Tier 1 EALs (for locations > 150m from surface water)	-	-	0.20	0.092	0.40	1.0	0.0092	130	240	0.092	4.7	10	17	240	68	15	-													
RHMW05 101.55' TOC ELEV	RHMW05-WG15	5/13/2009 ^a	< 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0158	U < 0.0326	U < 0.0158	U < 0.0158	U < 0.310	U	-												
	RHMW05-WG16	7/15/2009 ^a	< 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0165	U < 0.0341	U < 0.0165	U < 0.0165	U < 0.310	U	-												
	RHMW05	10/13/2009 ^{a,d}	< 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.017	U < 0.0352	U < 0.017	U 0.0173	F < 0.31	U	-												
	RHMW05-WG18	1/26/2010	< 0.0344	U < 0.0344	U < 0.0344	U < 0.0344	U < 0.0344	U < 0.0344	U 0.0190	J < 0.0344	U < 0.0344	U 0.0207	J 0.0246	J < 0.0712	U 0.0182	J < 0.0344	U < 0.620	U	-											
	RHMW05-WG19	4/13/2010	< 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U < 0.0326	U 0.0335	J < 0.0326	U 0.0752	J < 0.0326	U < 0.620	U	-											
	RHMW05-WG20	7/13/2010	< 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.0316	U < 0.620	U	-												
	ES005	10/20/2010	< 0.14	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.22	U	-												
	ES013	1/19/2011	< 0.14	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.22	U	-												
	ES024	4/20/2011	< 0.14	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.22	U	-												
	ES039	7/19/2011	< 0.14	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.24	J	-												
	ES051	10/25/2011	< 0.14	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.22	U	-												
	ES063	2/1/2012	< 0.12	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.22	U	-												
	ES070	4/16/2012	< 0.12	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.22	U	-												
	ES079	7/17/2012	< 0.12	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.17	J	-												
	ES080	7/17/2012 [*]	< 0.12	U < 0.12	U < 0.14	U < 0.10	U < 0.10	U < 0.16	U < 0.12	U < 0.14	U < 0.12	U < 0.10	U < 0.14	U < 0.12	U < 0.16	U < 0.21	J	-												
	ES005	10/22/2012	< 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U 0.038	J < 0.050	U < 0.200	U	-											
	ES015	1/29/2013	< 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U 0.075	J < 0.050	U < 0.200	U	-											
	ES024	4/23/2013	< 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U 0.033	J < 0.048	U < 0.200	U	-												
	ES033	7/23/2013	< 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U 0.033	J < 0.051	U < 0.200	U	-												
	ES042	10/22/2013	< 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U 0.17	J < 0.051	U < 0.200	U	-												
	ES049	1/16/2014	-		-		-		-		-		< 0.050	U < 0.050	U < 0.050	U	-													
	ES061	1/29/2014	< 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U < 0.050	U 0.064	J < 0.050	U < 0.200	U	-												
	ES068	3/6/2014	-		-		-		-		-		< 0.050	U < 0.050	U 0.038	J -	< 0.200	U	-											
	ES076	3/26/2014	-		-		-		-		-		< 0.050	U < 0.050	U 0.092	J -	0.286	J	-											
	ES084	4/22/2014	< 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U < 0.051	U 0.066	J < 0.051	U 0.123	J	-												
	ES095	5/28/2014	-		-		-		-		-		< 0.049	U < 0.049	U < 0.049	-	< 0.200	U	-											
ES101	6/24/2014	-		-		-		-		-		< 0.051	U < 0.051	U < 0.051	-	< 0.200	U	-												
ES108	7/22/2014	< 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.049	U < 0.200	U	-													
ES118	10/28/2014	< 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.096	U < 0.048	U < 0.048	U < 0.200	U	-													
ES124	1/27/2015	< 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.048	U < 0.096	U < 0.048	U < 0.048	U < 0.200	U	-													
ES135	4/21/2015	< 0.0050	U < 0.0050	U < 0.0050	U < 0.0050	U < 0.0050	U < 0.0050	U < 0.020	U < 0.0050	U < 0.0050	U < 0.0050	U < 0.0050	UJ < 0.0050	UJ < 0.0050	U 0.0052	J < 0.010	U 0.032													

Well Name	Sample ID	Date Sampled	8015														8260B																									
			TPH-d		TPH-g		TPH-o		TPH-g			1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)		1,4-Dichlorobenzene		Acetone		
			(µg/l)		(µg/l)				(µg/l)			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		
For wells < 150 m from surface water	-	-																																								
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	100		100		100		100		62		5.0		2.4		7.0		0.6		25		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500			
RHMW2254-01	RH-B-001	2/16/2005 st	<50	U	<50	U	<100	U	-		-		-		-		-		-		-		-		<0.0083	U	-		<0.50	U	-		-		-		-		-		-	
	RH-B-002	2/16/2005 st	<53	U	<50	U	<110	U	-		-		-		-		-		-		-		-		<0.0081	U	-		<0.50	U	-		-		-		-		-		-	
	RH-B-003	2/16/2005 st	<50	U	<50	U	<100	U	-		-		-		-		-		-		-		-		<0.0082	U	-		<0.50	U	-		-		-		-		-		-	
	RH-B-004	6/28/2005 st	43	J	<13	U	-		-		-		-		-		-		-		-		-		0.00096	U	-		<0.50 ^b	U	-		-		-		-		-		-	
	RH-B-005	6/28/2005 st	67	Z	<13	U	-		-		-		-		-		-		-		-		-		0.00096	U	-		<0.50 ^b	U	-		-		-		-		-		-	
	RH-B-006	6/28/2005 st	58	Z	<13	U	-		-		-		-		-		-		-		-		-		0.00096	U	-		<0.50 ^b	U	-		-		-		-		-		-	
	RH-B-007	9/8/2005 st	45	J	<13	U	59	J	-		-		-		-		-		-		-		-		0.00096	U	-		<0.12	U	-		-		-		-		-		-	
	RH-B-008	9/8/2005 st	<50	U	<13	U	<28	U	-		-		-		-		-		-		-		-		0.00096	U	-		<0.12	U	-		-		-		-		-		-	
	RH-B-009	9/8/2005 st	<50 ^d	U	<13	U	<100 ^d	U	-		-		-		-		-		-		-		-		0.00096	U	-		<0.12	U	-		-		-		-		-		-	
	RHMW2254W01	9/19/2005 st	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	RH-B-010 DISS	12/6/2005 st	38	J	<13	U	-		-		-		-		-		-		-		-		-		<0.0096 ^b	U	-		<0.12	U	-		-		-		-		-		-	
	RH-B-011 DISS	12/6/2005 st	24	J	<13	U	-		-		-		-		-		-		-		-		-		<0.0094 ^b	U	-		<0.12	U	-		-		-		-		-		-	
	RH-B-012 DISS	12/7/2005 st	<20	U	<13	U	-		-		-		-		-		-		-		-		-		<0.0095 ^b	U	-		<0.12	U	-		-		-		-		-		-	
	RHMW2254-01-GW02	7/10/2006 st	< 110	U	< 50	U	-		-		< 0.50	U	-		< 0.50	U	-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-GW06	12/5/2006 st	< 100	U	< 50	U	-		-		< 0.50	U	-		< 0.50	U	-		< 0.50	U	-		-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-WG07	3/27/2007 st	< 98	U	< 50	U	-		-		< 0.5	U	< 0.5	U	-		-		< 0.5	U	< 1	U	-		-		-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5	U		
	RHMW2254-01-WG08	6/12/2007 st	< 98	U	< 50	U	-		-		< 0.5	U	< 0.5	U	-		-		< 0.5	U	< 1	U	-		-		-		-		< 0.5	U	< 0.5	U	-		< 0.5	U	< 5	U		
	RHMW2254-01-WG0	9/10/2007 st	< 97	U	< 50	U	-		-		<0.29	U	< 0.3	U	-		-		0.24	J	< 0.41	U	-		-		-		-		< 0.25	U	< 0.23	U	-		< 0.22	U	< 10	U		
	RHMW2254-01-WG10	1/15/2008 st	< 102	U	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	-			
	RHMW2254-01-WG10.1	2/6/2008 st	< 100	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-WG10.1	2/6/2008 st	< 10.3	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-WG11	4/15/2008 st	< 86.0	U	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U		
	RHMW2254-01-WG12	7/29/2008 st	< 83.3	U	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U		
	RHMW2254-01-WG13	10/22/2008 st	< 84.2	U	< 10.0	U	-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 3.10	U		
	RHMW2254-WG13B	12/16/2008 st	-		-		-		-		< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.310	U	< 0.46	U	< 0.150	U	< 3.10	U		
	RHMWA01-WG13B	12/16/2008 st	-		-		-</																																			

Well Name	Sample ID	Date Sampled	8260B																					
			Benzene		Bromodichloromethane		Bromoform		Bromomethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethylene		Dibromochloromethane	
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)	
For wells < 150 m from surface water	-	-																						
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	5.0		0.12		80		8.7		5.0		25		16		70		1.8		70		0.16	
RHMW2254-01	RH-B-001	2/16/2005 st	<0.50	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-002	2/16/2005 st	<0.50	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-003	2/16/2005 st	<0.50	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-004	6/28/2005 th	<0.50 ^b	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-005	6/28/2005 th	<0.50 ^b	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-006	6/28/2005 th	<0.50 ^b	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-007	9/8/2005 th	<0.14	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-008	9/8/2005 th	<0.14	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-009	9/8/2005 th	<0.14	U	-		-		-		-		-		-		-		-		-		-	
	RHMW2254W01	9/19/2005 th	< 0.50	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-010 DISS	12/6/2005 th	<0.14	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-011 DISS	12/6/2005 th	<0.14	U	-		-		-		-		-		-		-		-		-		-	
	RH-B-012 DISS	12/7/2005 th	<0.14	U	-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-GW02	7/10/2006 th	< 0.50	U	-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-GW06	12/5/2006 th	< 0.50	U	-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-WG07	3/27/2007 th	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	-	
	RHMW2254-01-WG08	6/12/2007 th	< 0.5	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 0.5	U	< 1	U	< 0.5	U	< 1	U	< 0.5	U	< 2.5	U
	RHMW2254-01-WG0	9/10/2007 th	< 0.2	U	< 0.29	U	< 0.28	U	< 0.54	U	< 0.29	U	< 0.2	U	< 0.46	U	< 0.21	U	< 0.38	U	< 0.28	U	-	
	RHMW2254-01-WG10	1/15/2008 th	< 0.120	U	< 0.150	U	< 0.500	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.180	U
	RHMW2254-01-WG10.1	2/6/2008 th	-		-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-WG10.1	2/6/2008 th	-		-		-		-		-		-		-		-		-		-		-	
	RHMW2254-01-WG11	4/15/2008 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-01-WG12	7/29/2008 th	< 0.120	U	< 0.150	U	< 0.310	U	1.26	J	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-01-WG13	10/22/2008 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-WG13B	12/16/2008 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMWA01-WG13B	12/16/2008 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-01-WG14	2/4/2009 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-01-WG15	5/13/2009 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-01-WG16	7/15/2009 th	< 0.120	U	< 0.150	U	< 0.310	U	< 0.940	U	< 0.310	U	< 0.150	U	< 0.310	U	< 0.300	U	< 0.310	U	< 0.310	U	< 0.150	U
	RHMW2254-WG17	10/14/2009 th	< 0.12	U	< 0.15	U	< 0.31	U	< 0.94	U	< 0.31	U	< 0.15	U	< 0.31	U	< 0.3	U	< 0.31	U	< 0.31	U	< 0.15	U
	RHMW2254-01-WG18	1/27/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U
	RHMW2254-01-WG19	4/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U
	RHMW2254-01-WG20	7/13/2010	< 0.240	U	< 0.300	U	< 0.620	U	< 1.88	U	< 0.620	U	< 0.300	U	< 0.620	U	< 0.600	U	< 0.620	U	< 0.620	U	< 0.300	U
	ES004	10/19/2010	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES014	1/20/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES019	4/19/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES040	7/20/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.62	U	< 0.32	U	< 0.38	U
	ES050	10/25/2011	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.46	U
	ES062	2/1/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.46	U
	ES074	4/17/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.46	U
	ES077	7/17/2012	< 0.32	U	< 0.28	U	< 0.28	U	< 0.48	U	< 0.20	U	< 0.42	U	< 0.42	U	< 0.14	U	< 0.84	U	< 0.32	U	< 0.46	U
	ES006	10/22/2012	< 0.50	U	< 0.50	U	< 1.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	IH,U	< 0.50	U	< 0.50	U
	ES014	1/29/2013	< 0.50	U	< 0.50	U	< 2.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES023	4/23/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES032	7/23/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U
	ES041	10/22/2013	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U
	ES050	1/16/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I,CJ	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U
	ES060	1/29/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U,IH	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U

Well Name	Sample ID	Date Sampled	8260B									8260SIM							8011			8270C						
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethylene	Trichloroethylene	Vinyl chloride	Xylenes, Total (p/m-, o-xylene)	1,2-Dibromoethane	1,2-Dichloroethane	Bromodichloromethane	Dibromochloromethane	Tetrachloroethane, 1,1,2,2-	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[g,h,i]perylene							
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)							
For wells < 150 m from surface water	-	-																										
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	0.067	5.0	40	100	5.0	2.0	20	0.04	0.15	0.12	0.16	0.067	0.04	0.04	20	30	0.73	0.027	0.10							
RHMW2254-01	RH-B-001	2/16/2005 ^{b,c}	-	-	1.0	-	-	-	<0.50	U	-	-	-	-	-	-	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U		
	RH-B-002	2/16/2005 ^{d,f}	-	-	1.2	-	-	-	<0.50	U	-	-	-	-	-	-	<0.022	U	<0.022	U	<0.022	U	<0.022	U	<0.022	U		
	RH-B-003	2/16/2005 ^{a,d,f}	-	-	0.81	-	-	-	<0.50	U	-	-	-	-	-	-	<0.021	U	<0.021	U	<0.021	U	<0.021	U	<0.021	U		
	RH-B-004	6/28/2005 ^{a,e}	-	-	<0.50 ^b	U	-	-	-	<0.50 ^b	U	-	-	-	-	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.024 ^b	U		
	RH-B-005	6/28/2005 ^{a,m}	-	-	<0.50 ^b	U	-	-	-	<0.50 ^b	U	-	-	-	-	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U		
	RH-B-006	6/28/2005 ^{a,nf}	-	-	<0.50 ^b	U	-	-	-	<0.50 ^b	U	-	-	-	-	-	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U		
	RH-B-007	9/8/2005 ^{a,e}	-	-	<0.11	U	-	-	-	<0.22	U	-	-	-	-	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U		
	RH-B-008	9/8/2005 ^{a,f}	-	-	<0.11	U	-	-	-	<0.22	U	-	-	-	-	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U		
	RH-B-009	9/8/2005 ^{a,nf}	-	-	<0.11	U	-	-	-	<0.22	U	-	-	-	-	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U		
	RHMW2254W01	9/19/2005 ^{c,d}	-	-	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	RH-B-010 DISS	12/6/2005 ^{a,e}	-	-	<0.11	U	-	-	-	<0.22	U	-	-	-	-	-	<0.0020	U	0.0023	J	<0.0011	U	0.0022	J	<0.0037	U		
	RH-B-011 DISS	12/6/2005 ^{a,m}	-	-	<0.11	U	-	-	-	<0.22	U	-	-	-	-	-	<0.0020	U	0.0024	J	<0.0011	U	0.0033	J	<0.0037	U		
	RH-B-012 DISS	12/7/2005 ^{n,l}	-	-	<0.11	U	-	-	-	<0.22	U	-	-	-	-	-	<0.0020	U	<0.0018	U	<0.0011	U	<0.0021	U	<0.0037	U		
	RHMW2254-01-GW02	7/10/2006 ^{a,j,l}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	< 0.51	U	-	-	-	-	-	-	-	-		
	RHMW2254-01-GW06	12/5/2006 ^{n,l}	-	< 0.50	U	< 0.50	U	-	< 0.50	U	< 0.50	U	-	-	-	-	< 0.49	U	-	-	-	-	-	-	-	-		
	RHMW2254-01-WG07	3/27/2007 ^a	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	< 0.49	U	< 0.49	U	< 0.49	U	-	-	< 0.097	U		
	RHMW2254-01-WG08	6/12/2007 ^a	< 0.4	U	< 0.5	U	< 0.5	U	< 0.5	U	< 0.5	U	-	-	-	-	< 0.49	U	< 0.49	U	< 0.49	U	-	-	< 0.098	U		
	RHMW2254-01-WG0	9/10/2007 ^a	< 0.37	U	< 0.25	U	< 0.27	U	< 0.2	U	< 0.38	U	< 0.34	U	< 0.36	U	-	< 0.5	U	< 0.5	U	< 0.5	U	-	< 0.1	U		
	RHMW2254-01-WG10	1/15/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U		
	RHMW2254-01-WG10.1	2/6/2008 ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	RHMW2254-01-WG10.1	2/6/2008 ^a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	RHMW2254-01-WG11	4/15/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U		
	RHMW2254-01-WG12	7/29/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U		
	RHMW2254-01-WG13	10/22/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U		
	RHMW2254-WG13B	12/16/2008 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.93	U	-	-	-	-	-	-	-	-	-	-	-	-		
	RHMWA01-WG13B	12/16/2008 ^{a,c}	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.93	U	-	-	-	-	-	-	-	-	-	-	-	-		
	RHMW2254-01-WG14	2/4/2009 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U		
	RHMW2254-01-WG15	5/13/2009 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U		
	RHMW2254-01-WG16	7/15/2009 ^a	< 0.150	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.310	U	< 0.620	U	-	-	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U		
	RHMW2254-WG17	10/14/2009 ^a	< 0.15	U	< 0.31	U	< 0.31	U	< 0.31	U	< 0.31	U	< 1	U	-	-	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U		
	RHMW2254-01-WG18	1/27/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	-	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U		
	RHMW2254-01-WG19	4/13/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	-	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U		
	RHMW2254-01-WG20	7/13/2010	< 0.300	U	< 0.620	U	< 0.620	U	< 0.620	U	< 0.620	U	< 1.24	U	-	-	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U		
	ES004	10/19/2010	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
	ES014	1/20/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
	ES019	4/19/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
	ES040	7/20/2011	< 0.20	U	< 0.30	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
	ES050	10/25/2011	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
	ES062	2/1/2012	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
	ES074	4/17/2012	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	0.17	J	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	
ES077	7/17/2012	< 0.20	U	< 0.48	U	< 0.34	U	< 0.38	U	< 0.32	U	< 0.46	U	< 0.38	U	-	< 0.12	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U		
ES006	10/22/2012	< 0.50	U	< 0.50	U	0.71	J	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
ES014	1/29/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
ES023	4/23/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U		
ES032	7/23/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
ES041	10/22/2013	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U		
ES050	1/16/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	-	-	-	-	-	-	-	-	-	-		
ES060	1/29/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	<1.0	U	-	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U		

Well Name	Sample ID	Date Sampled	8270C																	6020	6010B/6020/200.8									
			Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Dissolved Lead (filtered)	Total Lead (unfiltered)													
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)													
For wells < 150 m from surface water	-	-																												
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	0.014	0.092	0.40	0.35	0.0092	8.0	3.9	0.092	2.1	2.1	17	4.6	2.0	5.6	-													
RHMW2254-01	RH-B-001	2/16/2005 ^{ee}	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U	<0.020	U	-	<0.020	U	<0.020	U	<0.020	U	<0.020	U	0.33	-					
	RH-B-002	2/16/2005 ^{ef}	<0.022	U	<0.022	U	<0.022	U	<0.022	U	<0.022	U	<0.022	U	-	<0.022	U	<0.022	U	<0.022	U	<0.022	U	0.06	-					
	RH-B-003	2/16/2005 ^{ef}	<0.021	U	<0.021	U	<0.021	U	<0.021	U	<0.021	U	<0.021	U	-	<0.021	U	<0.021	U	<0.021	U	<0.021	U	0.05	-					
	RH-B-004	6/28/2005 ^{ee}	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	0.952	-					
	RH-B-005	6/28/2005 ^{ee}	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.026 ^b	U	<0.020 ^b	U	<0.020 ^b	U	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	0.549	-					
	RH-B-006	6/28/2005 ^{ef}	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	-	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	<0.021 ^b	U	0.129	-					
	RH-B-007	9/8/2005 ^{ee}	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	-	<0.020 ^b	U	0.085	<0.020 ^b	U	<0.020 ^b	U	0.05	-						
	RH-B-008	9/8/2005 ^{ef}	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	-	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	0.03	-					
	RH-B-009	9/8/2005 ^{ef}	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	<0.020 ^b	U	-	<0.020 ^b	U	0.045	<0.020 ^b	U	<0.020 ^b	U	0.27	-						
	RHMW2254W01	9/19/2005 ^{ef}	-		-		-		-		-		-		-		-		-		-		-	-	-					
	RH-B-010 DISS	12/6/2005 ^{ee}	<0.0016	U	<0.0020	U	<0.0014	U	0.0038	J	<0.0017	U	0.0084	J	<0.0026	U	<0.0021	U	-	0.038	0.036	0.0078	J	0.0075	J	0.14	-			
	RH-B-011 DISS	12/6/2005 ^{ee}	<0.0016	U	<0.0020	U	<0.0014	U	0.0041	J	<0.0017	U	0.0092	J	<0.0026	U	<0.0021	U	-	0.022	0.024	0.0073	J	0.0070	J	0.04	-			
	RH-B-012 DISS	12/7/2005 ^{ef}	<0.0016	U	<0.0020	U	<0.0014	U	<0.0013	U	<0.0017	U	<0.0024	U	<0.0026	U	<0.0021	U	-	0.0071	J	0.011	J	<0.0032	U	<0.0023	U	0.02	B	-
	RHMW2254-01-GW02	7/10/2006 ^{gd}	< 0.10	U	-	-	-	-	-		< 0.26	U	-	-	-	-	< 0.26	U	-	-	-	-	-	< 1.7	U	-				
	RHMW2254-01-GW06	12/5/2006 ^{ef}	< 0.098	U	-	-	-	-	-		< 0.25	U	-	-	-	-	< 0.25	U	-	-	-	-	-	< 1.7	U	-				
	RHMW2254-01-WG07	3/27/2007 ^{ee}	< 0.097	U	< 0.049	U	< 0.097	U	< 0.097	U	< 0.049	U	< 0.24	U	< 0.24	U	< 0.049	U	< 0.24	U	< 0.24	U	< 0.49	U	< 0.24	U	< 1.7	U	-	
	RHMW2254-01-WG08	6/12/2007 ^{ee}	< 0.098	U	< 0.049	U	< 0.098	U	< 0.098	U	< 0.049	U	< 0.25	U	< 0.25	U	< 0.049	U	< 0.25	U	< 0.25	U	< 0.49	U	< 0.25	U	< 3.4	U	-	
	RHMW2254-01-WG0	9/10/2007 ^{ee}	< 0.1	U	< 0.05	U	< 0.1	U	< 0.1	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.05	U	< 0.25	U	< 0.25	U	< 0.5	U	< 0.25	U	< 2.1	U	-	
	RHMW2254-01-WG10	1/15/2008 ^{ef}	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0310	U	< 0.0150	U	< 0.0150	U	< 0.310	U	-	
	RHMW2254-01-WG10.1	2/6/2008 ^{ef}	-		-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	RHMW2254-01-WG10.1	2/6/2008 ^{ef}	-		-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	RHMW2254-01-WG11	4/15/2008 ^{ee}	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	< 0.0160	U	0.0435	J	0.0561	< 0.0332	U	< 0.0160	U	< 0.0160	U	< 0.310	U	-				
	RHMW2254-01-WG12	7/29/2008 ^{ef}	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0323	U	< 0.0156	U	< 0.0156	U	< 0.310	U	-			
	RHMW2254-01-WG13	10/22/2008 ^{ee}	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	< 0.0150	U	0.0276	J	< 0.0150	U	0.0466	J	< 0.0150	U	< 0.0150	U	< 0.310	U	-			
	RHMW2254-WG13B	12/16/2008 ^{ef}	-		-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	RHMWA01-WG13B	12/16/2008 ^{ef}	-		-	-	-	-	-		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	RHMW2254-01-WG14	2/4/2009 ^{ef}	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0161	U	< 0.0333	U	< 0.0161	U	< 0.0161	U	< 0.310	U	-			
	RHMW2254-01-WG15	5/13/2009 ^{ee}	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	< 0.0156	U	0.0180	J	< 0.0323	U	< 0.0156	U	< 0.0156	U	< 0.310	U	-			
	RHMW2254-01-WG16	7/15/2009 ^{ee}	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0165	U	< 0.0341	U	< 0.0165	U	< 0.0165	U	< 0.310	U	-			
	RHMW2254-WG17	10/14/2009 ^{ef}	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.017	U	< 0.0352	U	< 0.017	U	< 0.017	U	< 0.31	U	-			
	RHMW2254-01-WG18	1/27/2010	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	< 0.0316	U	0.0375	J	< 0.0316	U	< 0.0316	U	< 0.620	U	-			
	RHMW2254-01-WG19	4/13/2010	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0330	U	< 0.0682	U	< 0.0330	U	< 0.0330	U	< 0.620	U	-			
	RHMW2254-01-WG20	7/13/2010	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0320	U	< 0.0664	U	< 0.0320	U	< 0.0320	U	< 0.620	U	-			
	ES004	10/19/2010	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	3.3	-		
	ES014	1/20/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES019	4/19/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES040	7/20/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	1.9	-		
	ES050	10/25/2011	< 0.14	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES062	2/1/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
	ES074	4/17/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	< 0.22	U	-	
ES077	7/17/2012	< 0.12	U	< 0.12	U	< 0.14	U	< 0.10	U	< 0.10	U	< 0.16	U	< 0.12	U	< 0.14	U	< 0.12	U	< 0.10	U	< 0.14	U	< 0.16	U	2.2	-			
ES006	10/22/2012	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.037	J	< 0.050	U	< 0.050	U	< 0.200	U	0.169 ^h	J			
ES014	1/29/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.052	J	< 0.050	U	< 0.050	U	-		0.242 ^k	J			
ES023	4/23/2013	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	< 0.051	U	-		0.828 ^k	J			
ES032	7/23/2013	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	< 0.050	U	0.099	J	< 0.050	U	< 0.050	U	-		0.300 ^k	J			
ES041	10/22/2013	< 0.050	U	< 0.050	U	< 0.050																								

Well Name	Sample ID	Date Sampled	8015														8260B																							
			TPH-d		TPH-g		TPH-o		TPH-g		1,1,1-Trichloroethane		1,1,2-Trichloroethane		1,1-Dichloroethane		1,1-Dichloroethylene		1,2,3-Trichloropropane		1,2,4-Trichlorobenzene		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		1,2-Dichlorobenzene		1,2-Dichloroethane		1,2-Dichloropropane		1,3-Dichlorobenzene		1,3-Dichloropropene (total of cis/trans)		1,4-Dichlorobenzene		Acetone	
			(µg/l)		(µg/l)			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		
For wells < 150 m from surface water	-	-																																						
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	100		100		100		100		62		5.0		2.4		7.0		0.6		25		0.04		0.04		10		0.15		5.0		5.0		0.43		5.0		1500	
RHMW2254-01	ES067	3/6/2014	<20	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	ES075	3/26/2014	<10	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	ES085	4/22/2014	<10	U	-		-		< 30	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH
	ES094	5/28/2014	<12	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-	
	ES102	6/24/2014	<12	U	-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-		-			
	ES107	7/22/2014	<12	U	-		-		< 30	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH
	ES117	10/28/2014	22	J,HD	-		-		< 30	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U,ICH
	ES125	1/27/2015	<12	U	-		-		< 30	U	< 0.50	U	< 0.50	U	< 0.50	U	< 1.0	U	< 1.0	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 10	U
ES134	4/21/2015	14	B,J	<25	U	37	B,J	-		<0.20	U	<0.40	U	<0.20	U	<0.20	U	<0.50	U	<0.30	U	<0.50	U	<0.20	U	<0.20	U	-		<0.20	U	<0.20	U	<0.20	U	<0.20	U	<10	U	

Well Name	Sample ID	Date Sampled	8260B																																											
			Benzene		Bromodichloromethane		Bromoform		Bromomethane		Carbon Tetrachloride		Chlorobenzene		Chloroethane		Chloroform		Chloromethane		cis-1,2-Dichloroethylene		Dibromochloromethane		Ethylbenzene		Hexachlorobutadiene		Methyl ethyl ketone (2-Butanone)			Methyl isobutyl ketone (4 Methyl-2-Pentanone)		Methyl tert-butyl Ether		Methylene chloride		Naphthalene		Styrene		Tetrachloroethane, 1,1,1,2-				
			(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)			
For wells < 150 m from surface water	-	-																																												
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	5.0		0.12		80		8.7		5.0		25		16		70		1.8		70		0.16		30		0.86		7,100		170		5.0		4.8		17		10		0.52					
RHMW2254-01	ES067	3/6/2014	<0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		-	
	ES075	3/26/2014	<0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		-	
	ES085	4/22/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I,C,J	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U				
	ES094	5/28/2014	<0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-		-	
	ES102	6/24/2014	<0.50	U	-		-		-		-		-		-		-		-		-		-		<0.50	U	-		-		-		-		-		-		-		-		-			
	ES107	7/22/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U,I,J	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U				
	ES117	10/28/2014	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I,J	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U				
	ES125	1/27/2015	< 0.50	U	< 0.50	U	< 1.0	U	< 5.0	U,I,H	< 0.50	U	< 0.50	U	< 5.0	U	< 0.50	U	< 2.0	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 5.0	U	< 5.0	U	< 0.50	U	< 1.0	U	-		< 0.50	U	< 0.50	U				
ES134	4/21/2015	<0.10	U	-		<0.50	U	<0.30	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U	-		<0.10	U	<0.30	U	<4.0	U	<10	U	<0.30	U	<0.20	U	-		<0.20	U	<0.20	U					

Well Name	Sample ID	Date Sampled	8260B										8260SIM						8011			8270C																			
			Tetrachloroethane, 1,1,2,2-	Tetrachloroethylene		Toluene		trans-1,2-Dichloroethylene		Trichloroethylene		Vinyl chloride		Xylenes, Total (p/m-, o-xylene)		1,2-Dibromoethane		1,2-Dichloroethane		Bromodichloromethane		Dibromochloromethane		Tetrachloroethane, 1,1,2,2-		1,2-Dibromo-3-chloropropane		1,2-Dibromoethane		Acenaphthene		Acenaphthylene		Anthracene			Benzo[a]anthracene			Benzo[g,h,i]perylene	
			(µg/l)	(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)		(µg/l)			
For wells < 150 m from surface water	-	-																																							
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	0.067	5.0	40		100	5.0	2.0	20	0.04		0.15	0.12	0.16	0.067	0.04		0.04	20	30	0.73		0.027		0.10															
RHMW2254-01	ES067	3/6/2014	-	-	<0.50	U	-	-	-	<1.0	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	ES075	3/26/2014	-	-	<0.50	U	-	-	-	<1.0	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	ES085	4/22/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	-	-	-	-	-	-	-	-	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U			
	ES094	5/28/2014	-	-	<0.50	U	-	-	-	<1.0	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	ES102	6/24/2014	-	-	<0.50	U	-	-	-	<1.0	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	ES107	7/22/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	-	-	-	-	-	-	-	-	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U			
	ES117	10/28/2014	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	-	-	-	-	-	-	-	-	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.097	U	<0.097	U			
	ES125	1/27/2015	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	< 0.50	U	-	-	-	-	-	-	-	-	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.10	U	<0.10	U			
ES134	4/21/2015	-	<0.20	U	<0.10	U	<0.20	U	<0.10	U	<0.10	U	<0.010	U	<0.015	U	<0.010	U	<0.010	U	<0.015	U	<0.0040	U	<0.0040	U	<0.0050	U	<0.0050	U	<0.0050	U	<0.0050	U	<0.0050	U	<0.0050	U			

Well Name	Sample ID	Date Sampled	8270C																	6020		6010B/6020/200.8		
			Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Dissolved Lead (filtered)	Total Lead (unfiltered)							
			(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)						
For wells < 150 m from surface water	-	-																						
DOH Tier 1 EALs (for locations < 150m from surface water)	-	-	0.014	0.092	0.40	0.35	0.0092	8.0	3.9	0.092	2.1	2.1	17	4.6	2.0	5.6	-							
RHMW2254-01	ES067	3/6/2014	-	-	-	-	-	-	-	-	<0.050	U	<0.050	U	0.081	J	-	-	<0.200	U	0.155 ^k	J		
	ES075	3/26/2014	-	-	-	-	-	-	-	-	<0.050	U	<0.050	U	<0.050	U	-	-	0.207	J	0.140 ^k	J		
	ES085	4/22/2014	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	-	<0.0898 ^k	U	
	ES094	5/28/2014	-	-	-	-	-	-	-	-	<0.050	U	<0.050	U	<0.050	U	-	-	<0.200	U	<0.0898 ^k	U		
	ES102	6/24/2014	-	-	-	-	-	-	-	-	<0.049	U	<0.049	U	<0.049	U	-	-	<0.200	U	<0.0898 ^k	U		
	ES107	7/22/2014	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	<0.048	U	-	<0.0898 ^k	U	
	ES117	10/28/2014	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.049	U	<0.097	U	<0.049	U	<0.049	U	<0.049	U	-	0.211	J	
	ES125	1/27/2015	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.10	U	<0.050	U	<0.050	U	-	<0.0898 ^k	U	
ES134	4/21/2015	<0.0050	U	<0.0050	U	<0.0050	U	<0.0050	U	<0.020	U	<0.0050	U	<0.0050	UJ	<0.0050	UJ	<0.0050	UJ	<0.010	U	-	0.202 ^k	

Notes:
* duplicate samples
January 2008 to November 2009 depth to water measurements were entered in previous reports a tenth of a foot to high, adjustments were made to correct.
HDOH, Tier 1 Environmental Action Levels, Table D-1a. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS located within 150 meters of release site)
HDOH, Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site)
Background historical data are from February 2005 to July 2012.
Non-detects (from October 2012 and on) are the LOD values.
1 - The holding time until analysis was exceeded by one day; the results may be biased low.
a - MDL values were used for non-detects
b - MRL values were used for non-detects
c - no analytical lab reports found, could not verify results
d - no analytical lab reports available, used summary table from DOH Quarterly GW Reports
e - results from stilling basin, pumps offline
f - results from stilling basin, pumps online
g - analyzed by Method 6010B
h - analyzed by Method 6020
i - the MRL/MDL has been elevated due to a chromatographic interference
k - analyzed by Method 200.8
µg/l - micrograms per liter
Grey highlight - exceeds EALs
Bold - detected values
B - analyte was present in the associated method blank
D - the reported result is from a dilution
F - indicates that the compound was identified but the concentration was above the MDL and below the RL
ICH - Initial calibrtn. verif. recov. above method CL for this analyte
ICJ - Initial calibrtn. verif. recov. below method CL for this analyte
IH - Calibrtn. verif. recov. below method CL for this analyte
IJ - Calibrtn. verif. recov. above method CL for this analyte
J - indicates an estimated value
U - indicates that the compound was analyzed for but not detected at or above the stated limit. The stated limit is the LOD unless otherwise specified.
HD, Y, L, O, Z, H, ++ - the chromatographic pattern was inconsistent with the profile of the reference fuel standard
X - possible high bias due to matrix interference

APPENDIX C

Standard and Full Data Validation for Extractable Total Petroleum Hydrocarbons by SW-846 8015B

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Standard and Full Data Validation Procedure for Extractable Total Petroleum Hydrocarbons by SW-846 8015B

1. Purpose

This data validation procedure sets forth the standard operating procedure for performance of Standard and Full data validation of extractable total petroleum hydrocarbon (ETPH) data obtained under the United States (U.S.) Navy Environmental Restoration (ER) Program for Naval Facilities Engineering Command, Pacific (NAVFAC Pacific) and is consistent with protocol in the *Department of Defense Quality Systems Manual for Environmental Laboratories* (DoD QSM) (DoD 2006). Cursory validation is addressed separately in Procedure II-A, *Data Validation Presentation*.

2. Scope

This procedure applies to all Navy ER projects performed in the NAVFAC Pacific Area of Responsibility.

This procedure shall serve as management-approved professional guidance for the ER Program and is consistent with protocol in the Uniform Federal Policy-Quality Assurance Project Plan (DoD 2005). As professional guidance for specific activities, this procedure is not intended to obviate the need for professional judgment during unforeseen circumstances. Deviations from this procedure while planning or executing planned activities must be approved by both the Contract Task Order (CTO) Manager and the Quality Assurance (QA) Manager or Technical Director, and documented.

3. Responsibilities

The CTO Manager, the QA Manager or Technical Director, and the CTO QA Coordinator are responsible for ensuring that this procedure is implemented by data validation personnel.

Data validation personnel are responsible for implementing this procedure.

4. Procedure

This procedure addresses the validation of ETPH data obtained using U.S. Environmental Protection Agency Method SW-846 8015B. The quality control (QC) criteria identified in this procedure are those specified in the analytical method and the DoD QSM (DoD 2006). Where project specific criteria are identified in the CTO work plan, they will supersede the QC criteria identified in this procedure.

- Form I: Sample Results Summary Form
- Form II: Surrogate Recovery Summary Form
- Form III: Matrix Spike/Matrix Spike Duplicate or Blank Spike/Blank Spike Duplicate Recovery Summary Form
- Form IV: Method Blank Summary Form

- Form VI: Initial Calibration Summary Form
- Form VII: Continuing Calibration Summary Form
- Form VIII: ETPH Analytical Sequence Form

Standard data validation consists of review of summary forms only while Full data validation requires review of both summary forms and all associated raw data. Data review guidelines and how they apply to the different validation levels are indicated in the following text.

4.1 SAMPLE MANAGEMENT

QA/QC criteria included under sample management are sample preservation, handling, and transport; chain of custody (COC); and holding times.

4.1.1 Sample Preservation, Handling, and Transport

Standard and Full:

Evaluate sample collection, handling, transport, and laboratory receipt from COC and laboratory receipt checklists to ensure that the samples have been properly preserved and handled.

1. Samples are to be shipped in coolers that are maintained at above freezing to 6 degrees Celsius (°C). If the temperature exceeds 6°C but is less than or equal to 10°C, note this in the data validation report. If the temperature of receipt is greater than or equal to 11°C, positive values shall be flagged as estimated “J” and nondetects as estimated “UJ.” If the temperature is below 0°C, special note should be made that the samples were frozen and no qualification shall be required. In the event that both a cooler temperature and a temperature blank were measured, the temperature blank shall be evaluated for temperature compliance as it best assimilates the condition of the samples; however, both temperatures shall be noted in the data validation report.
2. If the temperature of the cooler upon receipt at the laboratory was not recorded, document that the laboratory is noncompliant.
3. Water samples shall not be preserved; they shall only be kept cool. If the water samples were inappropriately preserved with acid, the samples should not be analyzed. Analysis of an inappropriately preserved sample by the laboratory may require that all results be reported as unusable “R.”
4. If the receiving laboratory transferred the samples to another laboratory for analysis, apply the same temperature criteria to both the transfer COC and the original COC.

4.1.2 Chain of Custody

Standard and Full:

Examine the COC for legibility and check that all ETPH analyses requested on the COC have been performed by the laboratory. Ensure that the COC Sample Number (No.) on the laboratory Form I (or equivalent) matches the Sample Identification on the COC. Read the laboratory case narrative for additional information.

1. Any samples received for analysis that were not analyzed shall be noted in the data validation report, along with the reason(s) for failure to analyze the samples, if the reason(s) can be determined. Conversely, samples that were analyzed for ETPHs but were not requested should also be noted.
2. Any discrepancies in sample naming between the COC and Form I (or equivalent) shall be noted in the data validation report with the correct sample name being identified if the correct sample name can be determined.
3. If the receiving laboratory transferred the samples to another laboratory for analysis, both the original COCs and transfer COCs shall be present. Document in the data validation report if the transfer COCs are not present.
4. Internal chain of custody is required for all samples, extracts, and digestates from receipt to disposal. Verify the internal COC forms for completeness. Document in the data validation report if the internal COC forms are not present.
5. Each individual cooler shall have an individual COC that lists only samples contained within that cooler. Document in the data validation report if multiple coolers appear on one COC.

4.1.3 Holding Times

Standard and Full:

Holding times for ETPHs are measured from the time of collection (as shown on the COC) to the time of sample extraction and from the time of sample extraction to the time of sample analysis (as shown on the Form I [or equivalent]). Samples and extracts must be stored and refrigerated at above freezing to 6°C until the time of analysis.

Water samples shall be unpreserved and refrigerated at above freezing to 6°C and shall be extracted within 7 days of collection and analyzed within 40 days of extraction.

Soil samples shall be unpreserved and refrigerated at above freezing to 6°C and shall be extracted within 14 days of collection and analyzed within 40 days of extraction.

1. If the holding time is exceeded, flag all associated positive results as estimated "J" and all associated sample quantitation limits (nondetects) as estimated "UJ," and document that holding times were exceeded.
2. If holding times are grossly exceeded by greater than a factor of 2.0 (e.g., a non-preserved water sample has an extraction holding time of more than 14 days), detects will be qualified as estimated "J" and nondetects as unusable "R."

4.2 GC INSTRUMENT PERFORMANCE

Standard:

Instrument performance is not evaluated for Standard validation.

Full:

Evaluate the blank, standard, laboratory control sample, and sample chromatograms to ascertain the performance of the chromatographic system. Professional judgment should be used to qualify the data when unacceptable chromatographic conditions preclude proper quantitation or identification of total petroleum hydrocarbons (TPHs).

4.3 CALIBRATION

Compliance requirements for satisfactory instrument calibration are established to ensure that an instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that an instrument is capable of acceptable performance at the beginning of a sequence, and continuing calibration checks document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.

Standard and Full:

1. The proper analytical sequence must be followed to ensure proper quantitation and identification of all target compounds. For the quantitation analysis, standards containing all target compounds, (specific hydrocarbon products or n-alkanes) must be analyzed in the initial calibration at the beginning of the sequence. If n-alkane ranges rather than specific hydrocarbon products are being reported, n-alkane standards must be run in the initial calibration and should be analyzed periodically to ensure proper identification of the n-alkane range reported. An initial calibration verification standard must be analyzed following each initial calibration. The mid-level standard of the initial calibration must be analyzed after every 10 samples as the continuing calibration and at the end of the sequence to ensure system performance has not degraded. If the proper sequence has not been analyzed, use professional judgment to assess the reliability of the data.
2. The laboratory should report retention time window data for each compound and each column used to analyze the samples. The retention time windows are used for qualitative identification. The laboratory should also report quantitation ranges used for integration when analyzing samples. If the compounds in the continuing calibration standard do not fall within the retention time windows established in the initial calibration, the associated sample results should be carefully evaluated, especially the retention time of the surrogate spike compound. All samples injected after the last in-control standard are potentially affected.

4.3.1 Initial Calibration

Standard and Full:

For the initial calibration (at least five-points), the relative standard deviation (RSD) of the calibration factor (CF) for each target compound must be less than or equal to 20 percent. Verify the RSDs from the initial calibration summary forms. Alternatively, a linear curve may be used with a coefficient of determination; r^2 equal to or greater than 0.990. A second order calibration curve may also be used after evaluating the laboratory's acceptance criteria. If the initial calibration criteria are not met, flag all associated quantitative results as estimated "J" for detects and estimated "UJ" for nondetects.

Full:

Verify the percent RSDs (%RSD), r^2 , or laboratory established measure of linearity for the initial calibration from the raw data. Verify the CF for each target compound from the raw data. If errors are discovered, request a resubmittal from the laboratory. Validate the data according to the criteria outlined above.

4.3.2 Initial Calibration Verification

The initial calibration curve must be verified with a standard that has been purchased or prepared from an independent source each time initial calibration is performed. This initial calibration verification (ICV) must contain all of the method target compounds.

Standard and Full:

Verify the ICV was analyzed following the initial calibration and contained all method target compounds. The ICV must meet the laboratory established QC criteria. If any target exceeds the QC criteria, qualify the out of control compound(s) as estimated "UJ" for nondetects and "J" for detects in all samples associated with the initial calibration.

Full:

Verify from the raw data that there were no calculation or transcription errors by recalculating a percentage of the ICV calculations.

4.3.3 Continuing Calibration

Standard and Full:

Verify the percent difference (%D) from the continuing calibration summary forms. For the continuing calibration, the %D between the CF from the continuing calibration and the average CF from the initial calibration must be less than 15 percent. If the continuing calibration criteria are not met, qualify all associated results as estimated "J" for detects and "UJ" for nondetects. Although second column confirmation is not required for TPHs, the following guidelines are recommended if two columns are used: if the continuing calibration criteria are not met for both columns, flag all associated results as estimated "J" for detects or estimated, "UJ" for nondetects.

Full:

Verify the %Ds from the raw data.

4.4 METHOD BLANK

Method blank analytical results are assessed to determine the existence and magnitude of contamination problems. If problems with any method blank exist, all associated data must be carefully evaluated to determine whether there is any bias associated with the data, or if the problem is an isolated occurrence not affecting other data. No contaminants should be present in the method blank(s). The method blank should be analyzed on each gas chromatographic (GC) system used to analyze site samples.

1. The reviewer should identify samples associated with each method blank using Form IV (or equivalent). Verify that method blank analysis has been reported per matrix and concentration level for each set of samples. Each sample must have an associated method blank. Qualify positive results in samples with no method blank as unusable "R." Nondetects do not require qualification.
2. If the method blank was not analyzed on a GC used to analyze site samples, note the deficiency in the data validation report. Professional judgment shall be used for subsequent qualification of the data.
3. Compare the results of each method blank with the associated sample results. The reviewer should note that the blank analyses may not involve the same weights, volumes, percent moistures, or dilution factors as the associated samples. These factors must be taken into consideration when applying the 5× criteria discussed below, such that a comparison of the total amount of contamination is actually made.
4. If a compound is found in the blank, but not in the associated sample, no action is taken.
5. Any compound detected in both the sample and the associated blank shall be qualified when the sample concentration is less than 5 times the blank concentration. The applicable review qualifier(s) are summarized in Table II-H-1.

Table II-H-1: Blank Qualifications

Sample Result	Sample Value	Reviewer Qualifier(s)
≥ MDL and less than appropriate 5× rule	Leave as reported	U
Greater than appropriate 5× rule	Leave as reported	None

MDL method detection limit

Instances of contamination can be attributable to the dilution process. These occurrences are difficult to determine; however, the reviewers should qualify the sample data as nondetects, "U", when the reviewer determines the contamination to be from a source other than the sample.

In the event of gross contamination (i.e., saturated peaks) in the blanks, the associated samples must be evaluated for gross contamination. If gross contamination exists in the samples, the affected compounds should be qualified as unusable, "R."

Full:

1. Verify from the preparation log that the information recorded on Form IV (or equivalent) is correct.
2. Review the results of all blank raw data and Form I (or equivalent) to ensure that there were no false negatives or false positives.
3. Verify all target compound detects found in the method blanks against the raw data. Follow the guidelines specified in Sections 4.9 and 4.10 of this procedure. After the validity of the

target compounds are verified, validate the corresponding data using the criteria outlined above for Standard and Full validation.

4.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Blank spike/laboratory control sample (LCS) recoveries must be within the QC limits specified in the DoD QSM unless project-specific control limits are established for a given sample matrix.

Standard and Full:

1. If the blank spike/LCS results are 0 percent, only the spiked compounds that showed low recovery in all associated samples shall be flagged as "R" for nondetects and "J" for detects.
2. If blank spike/LCS results are below the control limits (but above 0 percent), spiked compounds which showed low recovery in all associated samples shall be flagged as estimated "UJ" or "J."
3. If blank spike/LCS results are above the control limits, detects for only the spiked compounds which showed high recovery in all associated samples shall be flagged as "J."
4. Professional judgment should be utilized in qualifying data for circumstances other than those listed above.

Full:

To verify that the spike percent recovery was calculated and reported correctly using the following equation, recalculate one spike recovery per matrix (and any spike that would result in the qualification of a sample).

$$\% \text{Recovery} = \frac{Q_d}{Q_a} \times 100$$

where:

$$\begin{aligned} Q_d &= \text{Quantity determined by analysis} \\ Q_a &= \text{Quantity added to samples/blanks} \end{aligned}$$

If transcription errors are discovered on Form III (or equivalent), request a resubmittal from the laboratory. Validate the data according to the criteria outlined above.

4.6 SURROGATE RECOVERY

Sample and blank surrogate recoveries must be within established control limits per the DoD QSM unless project-specific control limits are established. Verify that no samples or blanks have surrogates outside the criteria from Form II (or equivalent).

Standard and Full:

Surrogate recoveries should be reported on a Form II or equivalent. Check that surrogate recovery values have been reported for all samples, blanks, and spikes.

1. If surrogate recoveries are below the QC limits, but above 10 percent, flag associated positive results as estimated "J" and nondetects as "UJ."
2. If any surrogate recovery is less than 10 percent, flag all nondetects as unusable "R" and detects as estimated "J." No qualification is applied if surrogates are diluted beyond detection but note in the data validation report that surrogate evaluation could not be performed due to the high dilution factor.
3. If any surrogate recovery is above the upper QC limit, flag associated positive results as estimated "J." No qualification of nondetects is necessary in the case of high recoveries.
4. Surrogates may be reported as "diluted out" (D); if dilution is such that the surrogate can no longer be detected. If this is the case, note in the data validation report that surrogate evaluation could not be performed due to a high dilution factor. A full evaluation of the sample chromatogram may be necessary to determine that surrogates are truly "diluted out."

Full:

The reported surrogate recoveries on Form II should be verified from the raw data for a representative number of samples.

4.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix Spike/Matrix Spike Duplicate (MS/MSD) data are used to determine the effect of the matrix on a method's recovery efficiency and precision for a specific sample matrix.

No action is taken on MS/MSD data alone to qualify an entire data package. Using informed professional judgment, however, the data reviewer may use the MS/MSD results in conjunction with other QC criteria (i.e., surrogates and LCS) and determine the need for some qualification of the data.

The data reviewer should first try to determine the extent to which the results of the MS/MSD affect the associated data. This determination should be made with regard to the MS/MSD sample itself, as well as specific compounds for all samples associated with the MS/MSD.

In those instances where it can be determined that the results of the MS/MSD affect only the sample spiked, then qualification should be limited to this sample alone. It may be determined through the MS/MSD results, however, that a laboratory is having a systematic problem in the analysis of one or more compounds, which affects all associated samples.

Note: If a field blank was used for the MS/MSD, the information must be included in the data validation summary. Sample matrix effects have not been observed with field blanks therefore the recoveries and precision do not reflect the analytical impact of the site matrix.

Standard and Full:

The laboratory must spike and analyze a MS/MSD from the specific project site as required for each matrix type and analytical batch.

1. MS/MSD data should be reported on a MS/MSD summary form similar to Form III (or equivalent).
2. Compare the percent recovery and relative percent difference for each compound with control limits established by the Quality Assurance Objectives specified in the DoD QSM or project planning document.
3. If MS/MSD results are 0 percent, only the spiked compounds that showed low recovery in the parent sample shall be flagged as "R" for nondetects and "J" for detects.
4. If MS/MSD results are below the control limits (but above 0 percent), spiked compounds which showed low recovery in the parent sample shall be flagged as estimated "UJ" or "J."
5. If MS/MSD results are above the control limits, detects for only the spiked compounds which showed high recovery in the parent sample shall be flagged as "J."
6. If the Relative Percent Differences (RPDs) between MS and MSD recoveries are not within the control limits, qualify all results in the parent sample as estimated "J."
7. Failure of MS/MSD due to the presence of a target compound in the parent sample at greater than 2 times the spike concentration and or diluted by more than a factor of 2 should not result in any qualifications. Note the incident in the data validation report.

Full:

Check the raw data and recalculate one or more percent recoveries (%Rs) and RPDs, especially %Rs and RPDs that resulted in the qualification of data, using the following equations to verify that results on Form III (or equivalent) are correct.

$$\%R = \frac{(SSR - SR)}{SA} \times 100$$

$$RPD = \frac{ABS|SSR - SDR|}{(SSR + SDR)/2} \times 100$$

where:

SA	=	spike added
SR	=	sample result
SSR	=	spiked sample result
SDR	=	spiked duplicate result
ABS	=	absolute value

If transcription errors are discovered on Form III (or equivalent), request a resubmittal from the laboratory. Validate the data according to the criteria outlined above.

4.8 FIELD QC SAMPLES

Field QC samples discussed in this section of the procedures are equipment blanks, field blanks, and field duplicates.

4.8.1 Equipment Blanks and Field Blanks

Compounds detected in equipment blanks indicate the possibility of cross-contamination between samples due to improper equipment decontamination.

A field blank sample may be collected from each source of water used during each sampling event. The field blank may be analyzed to assess whether the chemical nature of the water used in decontamination may have affected the analytical results of site samples.

If ETPH compounds are detected in the equipment blanks and/or field blanks, the procedure for the qualification of associated sample results is identical to the 5× rule outlined in Section 4.4 of this procedure.

Standard and Full:

1. Determine which field QC samples apply to samples in the sample deliver group.
2. Ensure that units are correct when applying field QC blank qualifications. If samples are soil matrix, results must first be converted to micrograms per liter from micrograms per kilogram to make correct comparisons.
3. Because of the way in which the field blanks and equipment blanks are sampled, equipment blanks are not qualified because of field blank contamination. The affected samples are qualified, however, by either the field blank or equipment blank results, whichever has the higher contaminant concentration.
4. Equipment blanks and field blanks are only qualified with method blank results in order to account for laboratory contamination.

Full:

Compound identification and quantification of field blank and equipment blank samples must be verified. Follow the guidelines specified in Sections 4.9 and 4.10 of this procedure.

4.8.2 Field Duplicates

Field duplicates consist of either collocated or subsampled samples. Field duplicates for ground water and surface water samples are generally considered to be collocates. Soil duplicate samples may be homogenized and subsampled in the field (or at the laboratory) to form an original and duplicate sample, or may be an additional volume of sample collected in a separate sample container to form a collocate sample. Field duplicate results are an indication of both field and laboratory precision; the results may be used to evaluate the consistency of sampling practices.

Standard and Full:

1. Check to ensure that field duplicates were collected and analyzed as specified in the project planning documents. If the sampling frequency is less than the frequency stated in the planning documents, no qualification of the associated sample results is necessary but the incident shall be discussed in the data validation report.
2. For field duplicate results, if the RPDs are greater than 50 percent for water or 100 percent for soil or as stated in the planning document if more conservative, no qualification of the associated sample results is necessary, but the differences should be noted in the data validation summary.

Full:

Before comparison of duplicates, the compound identification and quantification must be verified. Follow the guidelines specified in Sections 4.9 and 4.10 of this procedure.

4.9 TARGET COMPOUND IDENTIFICATION

Qualitative criteria for compound identification have been established to minimize the number of erroneous identifications of compounds. An erroneous identification can be either a false positive (reporting a compound present when it is not) or a false negative (not reporting a compound that is present).

Standard:

Compound identification is not verified for Standard validation.

Full:

1. Review Form I or equivalent. Check for errors.
2. Verify that the retention times of sample compounds reported on the Form X or equivalent fall within the calculated retention time windows.

4.10 COMPOUND QUANTITATION AND REPORTING LIMITS

The objective is to ensure that the reported quantitation results and reporting limits (RLs) are accurate. All soil sample results are reported on a dry weight basis.

Standard:

Specific compound quantitation is not verified for Standard validation.

Standard and Full:

1. Verify that the RLs for nondetects are equal to the method detection limits (MDLs). Verify that an annual MDL study was performed or quarterly MDL verification checks were performed in accordance with the DoD QSM. The MDL verification check must be evaluated to determine whether the laboratory can reliably detect and identify all target

analytes at a spike concentration of approximately two times the current reported MDL. Qualify nondetects as unusable "R."

2. Check that reported nondetects and positive values have been adjusted to reflect sample dilutions and for soil samples, sample moisture. When a sample is analyzed at more than one dilution, the lowest RLs are used unless a QC criterion has been exceeded. In this case, the higher RLs from the diluted analysis are used. The least technically sound data will be flagged "R" with a qualification code "D."
3. If a sample requiring a dilution analysis due to a target compound detect exceeding the calibration linear range was not reanalyzed at a dilution, the compound exceeding calibration range shall be qualified "J."
4. If the laboratory reanalyzed a sample and submitted both sample results, the reviewer must determine which of the two analyses has better data quality. Only one analysis should be reported and the other is rejected.

Full:

1. Compound quantification should be verified by recalculation from the raw data for a representative number of samples.
2. Verify from the standard chromatograms that the instrument sensitivity is adequate to support the RLs. Poor sensitivity may result in elevated RLs.

5. Records

A Form I that has been validated and verified, and has been determined by the data validator to accurately represent the appropriate sample results to be utilized, shall be stamped "NAVFAC PACIFIC VALIDATED." Additionally, sample result forms for which the data has been validated at the Full validation level shall be stamped or noted "Full."

Copies of all documents generated by the data validation personnel will be stored for no less than 10 years. The original validated laboratory data shall be archived to the Federal Records Center at project completion.

6. References

40 Code of Federal Regulations (C.F.R.) 136. *Guidelines Establishing Test Procedures for the Analysis of Pollutants*. Available: <http://ecfr.gpoaccess.gov>.

Department of Defense, United States (DoD). 2005. *Uniform Federal Policy for Quality Assurance Project Plans, Part 1: UFP-QAPP Manual*. Final Version 1. DoD: DTIC ADA 427785, EPA-505-B-04-900A. In conjunction with the U. S. Environmental Protection Agency and the Department of Energy. Washington: Intergovernmental Data Quality Task Force. March. On-line updates available at: http://www.epa.gov/fedfac/pdf/ufp_qapp_v1_0305.pdf.

———. 2006. *Department of Defense Quality Systems Manual for Environmental Laboratories*. Final version 3. Prepared by DoD Environmental Data Quality Workgroup, Department of Navy, Lead Service. January.

Department of the Navy (DON). 2002. *Navy Environmental and Natural Resources Program Manual*. OPNAV Instruction 5090.1B Change 3. October.

Environmental Protection Agency, United States (EPA). 1997. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*. 3rd ed., Final Update IIIA. Office of Solid Waste. Updates available: www.epa.gov/epaoswer/hazwaste/test/new-meth.htm.

———. 2005. *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*. EPA-540/R-04/009. (OSWER 9240.12-46). Office of Superfund Remediation and Technology Innovation. January.

Procedure II-A, *Data Validation Presentation*.

7. Attachments

None.

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APPENDIX D

Groundwater Sampling Logs

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Groundwater Sampling Log

Well ID: RHMW01 Location: Red Hill Bulk Fuel Storage Facility Project No.: 112066
Initial Water Level: 84.33 ft Date: 4/20/2015 Time: 934
Total Depth of Well: 97.35 ft Personnel Involved: Kirk Markle, Jeff Hattemer
Length of Saturated Zone: 13.02 ft Weather Conditions: Not applicable – well is located indoors
Volume of Water to be Removed: 8 L Method of Removal: Bladder Pump
Water Level After Purging: 84.37 ft Pumping Rate: 0.18 L/min

Well Purge Data:

Time	Volume Removed	pH	Conductivity (mS/cm)	DO (mg/l)	Temperature	Salinity	Redox (ORP) (mV)
940	0.0 L	8.12	0.332	15.19	25.43	-	37.7
945	0.9 L	6.65	0.324	1.37	23.59	-	-141.1
949	1.9 L	6.65	0.324	1.49	23.63	-	-138.8
953	2.8 L	6.78	0.325	1.41	23.81	-	-137.4
957	3.8 L	6.81	0.325	1.31	24.11	-	-183.7
1001	4.7 L	6.74	0.323	1.64	24.22	-	-142.6
1008	5.7 L	6.75	0.323	1.58	24.16	-	-141.3
1015	6.6 L	6.82	0.333	1.74	24.12	-	-140.2
1021	7.6 L	6.88	0.331	1.71	24.16	-	-139.9
1028	8.5 L	6.87	0.330	1.76	24.11	-	-139.7

Sample Withdrawal Method: Bladder Pump
Appearance of Sample:
Color: Clear
Turbidity: None
Sediment: None
Other: None

Laboratory Analysis Parameters and Preservatives: TPH-g, -d, -o - 8015; VOCs - 8260, 8260 SIM, 8011;
PAHs - 8270 SIM; lead - 6020

Number and Types of Sample Containers: 8 - 40ml VOAs, 3 - 1L amber jar, 1 - 250ml HDPE

Sample Identification Numbers: ES130 [1045]

Decontamination Procedures: Triple Rinsed

Notes: YSI did not have salinity parameter.

Sampled by: Kirk Markle, Jeff Hattemer

Sampled Delivered to: ALS Transporters: FedEx

Date: 4/22/2015 Time: 1500

Capacity of Casing (Gallons/Linear Feet)
2"-0.16 • 4"-0.65 • 8"-2.61 • 10"-4.08 • 12"-5.87



Groundwater Sampling Log

Well ID: RHMW02 Location: Red Hill Bulk Fuel Storage Facility Project No.: 112066

Initial Water Level: 86.97 ft Date: 4/20/2015 Time: 1105

Total Depth of Well: 92.91 ft Personnel Involved: Kirk Markle, Jeff Hattemer

Length of Saturated Zone: 5.94 ft Weather Conditions: Not applicable – well is located indoors

Volume of Water to be Removed: 7.0 L Method of Removal: Bladder Pump

Water Level After Purging: 86.99 ft Pumping Rate: 0.32 L/min

Well Purge Data:

Time	Volume Removed	pH	Conductivity (mS/cm)	DO (mg/l)	Temperature	Salinity	Redox (ORP) (mV)
1138	0.0 L	6.54	0.575	3.98	24.49	-	-113.8
1140	0.9 L	6.49	0.575	1.30	24.59	-	-128.3
1142	1.9 L	6.48	0.575	1.29	24.61	-	-127.6
1146	2.8 L	6.49	0.576	1.84	24.93	-	-139.1
1148	3.8 L	6.48	0.578	1.85	24.99	-	-132.8
1152	4.7 L	6.38	0.597	1.75	24.48	-	-124.7
1155	5.7 L	6.34	0.597	1.68	24.55	-	-121.6
1158	6.6 L	6.34	0.597	1.60	24.35	-	-181.4
1202	7.6 L	6.38	0.597	1.48	23.88	-	-182.0

Sample Withdrawal Method: Bladder Pump

Appearance of Sample:

Color: Clear
Turbidity: Low
Sediment: None
Other: None

Laboratory Analysis Parameters and Preservatives: TPH-g, -d, -o - 8015; VOCs - 8260, 8260 SIM, 8011;
PAHs - 8270 SIM; lead - 6020

Number and Types of Sample Containers: 24 - 40ml VOAs, 8 - 1L amber jar, 4 - 500ml HDPE

Sample Identification Numbers: ES131 [1215], ES131 MS/MSD [1215], ES132 (Dup) [1245]

Decontamination Procedures: Triple Rinsed

Notes: YSI did not have salinity parameter.

Sampled by: Kirk Markle, Jeff Hattemer

Sampled Delivered to: ALS Transporters: FedEx

Date: 4/22/2015 Time: 1500

Capacity of Casing (Gallons/Linear Feet)
2"-0.16 • 4"-0.65 • 8"-2.61 • 10"-4.08 • 12"-5.87



Groundwater Sampling Log

Well ID: RHMW03 Location: Red Hill Bulk Fuel Storage Facility Project No.: 112066
Initial Water Level: 103.18 ft Date: 4/20/2015 Time: 1425
Total Depth of Well: 110.12 ft Personnel Involved: Kirk Markle, Jeff Hattemer
Length of Saturated Zone: 6.94 ft Weather Conditions: Not applicable – well is located indoors
Volume of Water to be Removed: 7.0 L Method of Removal: Bladder Pump
Water Level After Purging: 103.32 ft Pumping Rate: 0.29 L/min

Well Purge Data:

Time	Volume Removed	pH	Conductivity (mS/cm)	DO (mg/l)	Temperature	Salinity	Redox (ORP) (mV)
1428	0.0 L	6.72	0.819	5.90	27.46	-	-42.5
1431	0.9 L	6.69	0.816	2.24	27.64	-	-38.6
1435	1.9 L	6.65	0.811	1.76	27.67	-	-36.3
1439	2.8 L	6.63	0.808	1.68	27.66	-	-35.1
1442	3.8 L	6.62	0.807	1.54	27.66	-	-34.5
1445	4.7 L	6.52	0.806	1.51	27.63	-	-34.7
1448	5.7 L	6.63	0.807	1.49	27.59	-	-31.2
1451	6.6 L	6.63	0.808	1.42	27.48	-	-35.8
1454	7.6 L	6.63	0.808	1.38	27.44	-	-36.5

Sample Withdrawal Method: Bladder Pump
Appearance of Sample:
Color: Clear
Turbidity: Low
Sediment: None
Other: None

Laboratory Analysis Parameters and Preservatives: TPH-g, -d, -o - 8015; VOCs - 8260, 8260 SIM, 8011; PAHs - 8270 SIM; lead - 6020
Number and Types of Sample Containers: 8 - 40ml VOAs, 3 - 1L amber jar, 1 - 250ml HDPE
Sample Identification Numbers: ES133 [1500]
Decontamination Procedures: Triple Rinsed
Notes: YSI did not have salinity parameter.
Sampled by: Kirk Markle, Jeff Hattemer
Sampled Delivered to: ALS Transporters: FedEx
Date: 4/22/2015 Time: 1500

Capacity of Casing (Gallons/Linear Feet)
2"-0.16 • 4"-0.65 • 8"-2.61 • 10"-4.08 • 12"-5.87



Groundwater Sampling Log

Well ID: RHMW05 Location: Red Hill Bulk Fuel Storage Facility Project No.: 112066
Initial Water Level: 83.72 ft Date: 4/21/2015 Time: 955
Total Depth of Well: Unable to Measure Personnel Involved: Kirk Markle, Jeff Hattemer
Length of Saturated Zone: Unknown Weather Conditions: Not applicable – well is located indoors
Volume of Water to be Removed: 7.0 L Method of Removal: Bladder Pump
Water Level After Purging: 83.72 ft Pumping Rate: 0.47 L/min

Well Purge Data:

Time	Volume Removed	pH	Conductivity (mS/cm)	DO (mg/l)	Temperature	Salinity	Redox (ORP) (mV)
1005	0.0 L	7.05	0.873	9.21	23.45	-	94.1
1007	0.9 L	7.75	0.819	7.89	23.29	-	80.5
1009	1.9 L	7.70	0.779	7.85	23.22	-	69.3
1011	2.8 L	7.63	0.782	7.76	23.12	-	69.0
1013	3.8 L	7.57	0.817	7.57	23.10	-	49.1
1015	4.7 L	7.54	0.826	7.43	23.10	-	42.0
1017	5.7 L	7.52	0.830	7.63	23.10	-	35.3
1019	6.6 L	7.50	0.836	7.69	23.10	-	28.5
1021	7.6 L	7.48	0.839	7.63	23.12	-	25.4

Sample Withdrawal Method: Bladder Pump
Appearance of Sample:
Color: Clear
Turbidity: None
Sediment: None
Other: None

Laboratory Analysis Parameters and Preservatives: TPH-g, -d, -o - 8015; VOCs - 8260, 8260 SIM, 8011;
PAHs - 8270 SIM; lead - 6020

Number and Types of Sample Containers: 8 - 40ml VOAs, 3 - 1L amber jar, 1 - 250ml HDPE

Sample Identification Numbers: ES135 [1045]

Decontamination Procedures: Triple Rinsed

Notes: YSI did not have salinity parameter.

Sampled by: Kirk Markle, Jeff Hattemer

Sampled Delivered to: ALS Transporters: FedEx

Date: 4/22/2015 Time: 1500

Capacity of Casing (Gallons/Linear Feet)
2"-0.16 • 4"-0.65 • 8"-2.61 • 10"-4.08 • 12"-5.87



Groundwater Sampling Log

Well ID: RHMW2254-01 Location: Red Hill Bulk Fuel Storage Facility Project No.: 112066

Initial Water Level: 82.99 ft Date: 4/21/2015 Time: 850

Total Depth of Well: Not applicable Personnel Involved: Kirk Markle, Jeff Hattemer

Length of Saturated Zone: Not applicable Weather Conditions: Not applicable – well is located indoors

Volume of Water to be Removed: 5.0 L Method of Removal: Bladder Pump

Water Level After Purging: 82.99 ft Pumping Rate: 0.47 L/min

Well Purge Data:

Time	Volume Removed	pH	Conductivity (mS/cm)	DO (mg/l)	Temperature	Salinity	Redox (ORP) (mV)
855	0.0 L	7.47	0.617	8.24	21.75	-	157.2
857	0.9 L	7.24	0.619	7.87	21.52	-	143.4
859	1.9 L	7.15	0.619	7.90	21.46	-	145.7
901	2.8 L	7.14	0.620	8.03	21.38	-	132.8
903	3.8 L	6.95	0.622	8.05	21.34	-	137.5
905	4.7 L	6.92	0.622	8.02	21.32	-	132.4
907	5.7 L	6.89	0.622	8.00	21.30	-	132.1

Sample Withdrawal Method: Bladder Pump

Appearance of Sample:

Color: Clear
Turbidity: Clear
Sediment: None
Other: None

Laboratory Analysis Parameters and Preservatives: TPH-g, -d, -o - 8015; VOCs - 8260, 8260 SIM, 8011; PAHs - 8270 SIM; lead - 200.8

Number and Types of Sample Containers: 8 - 40ml VOAs, 3 - 1L amber jar, 1 - 250ml HDPE

Sample Identification Numbers: ES134 [0945]

Decontamination Procedures: Triple Rinsed

Notes: YSI did not have salinity parameter.

Sampled by: Kirk Markle, Jeff Hattemer

Sampled Delivered to: ALS Transporters: FedEx

Date: 4/22/2015 Time: 1500

Capacity of Casing (Gallons/Linear Feet)
2"-0.16 • 4"-0.65 • 8"-2.61 • 10"-4.08 • 12"-5.87

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APPENDIX E

Field Notes

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Location RHSFDate 3/26/15Project / Client NAV FAC1300: Sump 16

S	110	116	107	120	113
M	119	107	119	119	116
D	807	877	926	926	884

1317 Sump 17

S	3177	3116	2910	3177	3095
M	2538	2343	2459	2549	2472
D	4092	3851	3715	4092	3938

1330: Sump 18

scaffolding placed on soil vapor point, ~~per~~ personnel working on tank 18, no sample collected.

1334: Sump 20

S	2259	2200	2015	2200	2211
M	1623	1614	1510	1623	1593
D	2018	2007	2059	2059	2041

1350: Soil vapor monitoring completed.1405: ESI exit tunnels1415: ESI leave site

RHSFNAV FACDate 4/20/15 109

Personnel: JH, KM

Purpose: SV, GW sampling

0800 @ RHSF, Calibrate P.D.

VOL = 10.2 ppm. Safety meeting

0845 Enter tunnel.

Gauge RHMW01. DTW = 84.33

Collected sample ES130.

2.25 gal mixed

Gauge RHMW02 DTW = 86.97

1215 Collected samples ES131, ES

131MS/MSD, ES132 (dupe @

1245.

2 gal mixed

1400 Gauge RHMW03. DTW = 103.18

1500 Collected sample ES133.

2 gal mixed

1630 Depart tunnel.

1700 Done packing up.

Leave fuel fill

RHSF

4/20/15

NAVFAC

00950 SUMP02

S	150	156	160	160	157
M	147	87	111	147	123
D	183	156	135	183	164

00958 SUMP03

S	367	364	352	367	363
M	388	424	437	437	422
D	391	467	418	467	436

1014 SUMP04

S	216	271	418	449	339
M	226	286	415	415	336
D	283	250	253	283	268

1029 SUMP05

A S	244	245	246	246	245
A M	155	159	159	159	158
A D	156	151	152	152	150

1045 SUMP06

A S	11.8	13.3	14.1	14.1	13.3
A M	8884	8662	8538	8884	8747

1101 SUMP07

S	6305	7610	7911	7911	7434
M	8179	7733	7863	7863	7660
D	48.9	52.0	52.2	52.2	51.3

RHSF

4/20/15

NAVFAC

1117 SUMP08

S	4617	5406	524	524	5268
M	5584	5855	6000	6000	5860
D	3201	3007	2962	3701	3343

1133 SUMP09

S	1555	1401	1314	1555	1456
M	1952	2311	2552	2552	2342
D	2320	2408	2456	2456	2410

1149 SUMP10

S	623	732	804	804	741
D	1154	1163	1193	1193	1175

1200 SUMP11

M	741	867	804	867	835
D	Deep blocked				

1207 SUMP12

S	620	663	720	720	681
M	617	575	569	617	595
D	678	681	777	777	728

1223 SUMP13

S	590	852	802	852	774
M	931	904	901	961	939
D	840	1190	1250	1250	1145

RHSE

4/20/15

NAVFAC

1239 SVMP 14

S	226	171	141	226	191
M	126	114	78	126	111
D	409	376	476	476	434

1255 SVMP 15

S	524	617	629	629	600
M	Mid	black	No sample		
D	675	638	614	675	655

1311 SVMP 16

S	213	289	343	343	297
M	274	280	328	328	303
D	385	418	349	418	393

1328 SVMP 17

S	512	518	491	518	510
M	735	720	741	741	734
D	822	943	1021	1021	952

1344 SVMP 18

S	16.4	20.1	21.9	21.9	20.1
M	36.6	38.1	39.4	39.4	38.4

1356 SVMP 20

S	2985	3972	4400	4400	3939
M	4089	4515	4840	4840	4586
D	3186	3462	2715	3462	3207

★ = 80m

SH 4/20/15

RHSE

4/21/15

NAVFAC

Purpose: LGW samplings

Personnel: JH, KM

0800 @ RHSE, Safety meeting

0820 Enter tunnel

0830 Enter pump house

0850 Gauge MV2254-01, DTW=82.93

0945 Collected sample ES134.

1.5 gal purged

0955 Gauge RUMV05, DTW=83.72

1045 Collected sample ES135

2 gal purged

1115 Depart tunnel, Dump

water in drum.

1130 Depart site.

JH

4/21/15

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APPENDIX F

**Laboratory Report
(included on attached CD)**

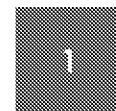
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APPENDIX G

Fact Sheet, Quantitation and Detection

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Fact Sheet: Detection and Quantitation — What Project Managers and Data Users Need to Know



As a Project Manager or decision-maker, you may use environmental data to accomplish one or more of the following tasks:

- Determine whether a chemical substance is present in an environmental sample at or above some threshold value or action level;
- Verify that a pollutant concentration remains below a permit limit;
- Evaluate potential risks to human health or the environment;
- Monitor changes in concentrations of contaminants; or
- Determine the effectiveness of remediation activities.

Making correct decisions in these cases often depends on the ability of an analytical method to detect and measure extremely low concentrations of a substance.

This fact sheet has been prepared to: 1) provide Project Managers and data users with basic information about detection and quantitation concepts; and 2) acquaint the reader with detection and quantitation terminology and requirements contained in the *DoD Quality Systems Manual for Environmental Laboratories (DoD QSM)*, Version 4.1. This information should help clarify the uncertainty associated with reporting low-concentration data. It should also help project teams understand the importance of selecting analytical methods that are sensitive enough for their intended uses, i.e., capable of generating reliable data (data of known precision and bias) at the project-specific decision levels.

Measures of Sensitivity — Basic Concepts

The following terms are used to describe the routine sensitivity of analytical procedures:

- DL – Detection Limit
- LOD – Limit of Detection
- LOQ – Limit of Quantitation

All measures of sensitivity are specific to the analyte, sample matrix, test method, instrumentation, and analyst/laboratory performance. Therefore, analytical performance must be demonstrated for each variable (e.g., it is possible that two “identical” instruments from the same manufacturer may exhibit different sensitivities).

The Detection Limit (DL) is the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. In other words, if a substance is detected at or above the DL, it can be reliably stated (with 99% confidence) that the analyte is present (there is a 1% chance that the analyte is not present (a false positive)). Note that for reporting purposes, any result at or above the DL must also meet qualitative identification criteria required by the test method. Although a result at or above the DL indicates that the analyte is present, the absence of a result at or above the DL is inconclusive (i.e., one cannot confidently state whether the analyte is present or absent), because the false negative rate at the DL is 50%.

The Limit of Detection (LOD) is the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a 99% confidence level. In other words, if a sample has a true concentration at the LOD, there is a minimum probability of 99% of reporting a “detection” (a measured value \geq DL) and a 1% chance of reporting a non-detect (a false negative).

The failure to obtain a “detection” should be reported as “<LOD,” because the false negative rate at the LOD is 1%. Reporting the sample result as “<DL” is inappropriate because, as stated above, the false negative rate at the DL is 50%.

Fact Sheet: Detection and Quantitation — What Project Managers and Data Users Need to Know

The Limit of Quantitation (LOQ) is the lowest concentration of a substance that produces a quantitative result within specified limits of precision and bias. The LOQ is typically larger than the LOD (but may be equal to the LOD, depending upon the acceptance limits for precision and bias); therefore, the following is true:

$$DL < LOD \leq LOQ$$

Quantitative results can only be achieved at or above the LOQ. Measurements between the DL and the LOQ assure the *presence* of the analyte with confidence, but their numeric values are estimates.

Types of Procedures for Estimating Sensitivity

Numerical estimates of the DL, LOD, or LOQ for a specific analyte, matrix, and method can be calculated using various statistical procedures, which involve spiking reagent water or other specific matrix with low concentrations of the analyte of interest. At this time, unfortunately, universally accepted statistical procedures do not exist.

The estimator that has been most commonly used by environmental laboratories is the EPA Method Detection Limit (MDL), which is an approximation of the DL. EPA has defined the MDL as the “minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, and is determined from analysis of a sample in a given matrix containing the analyte.”¹ Calculating the MDL at 99% confidence means there is a 1% probability that a sample having a result at or above the MDL is a false positive. The EPA MDL was designed to protect against false positives.

Uses and Limitations of the MDL

When performed correctly and consistently, MDLs determined using the EPA procedure can be useful for comparing different laboratories’ performance using the same methods, or the performance of different methods within the same laboratory. Laboratories typically determine the MDL in reagent water, resulting in a “best-case” MDL, which provides limited information about method performance on real-world samples.

The EPA MDL procedure has been criticized as a poor estimator of the DL for the following reasons:

1. It is a single laboratory, short-term estimator that fails to account for analytical bias, changing instrument conditions, or analyst skill.
2. It assumes uniform variance across all possible spike concentrations, failing to account for the fact that variance increases at higher concentrations.
3. It assumes that measured values at the spike concentration are normally distributed. By using this procedure and spiking at very low concentrations, laboratories have been able to calculate MDLs that cannot be achieved in practice.

DoD QSM Requirements

For the reasons discussed in the previous paragraph, the DoD QSM requires that laboratories verify measures of method sensitivity, in terms of the LOD and LOQ, at least quarterly. Requirements for the LOD and the LOQ are contained in DoD QSM Boxes D-13 and D-14, respectively, which follow:

¹ 40 Code of Federal Regulations (CFR) Part 136, Appendix B, rev. 1.11.

Fact Sheet: Detection and Quantitation — What Project Managers and Data Users Need to Know

Box D-13

Limit of Detection (LOD): Determination and Verification (Requirement)

A laboratory shall establish a detection limit (DL) using a scientifically valid and documented procedure for each suite of analyte-matrix-method, including surrogates. The detection limit shall be used to determine the LOD for each analyte and matrix as well as for all preparatory and cleanup methods routinely used on samples, as follows:

After each detection limit determination, the laboratory must immediately establish the LOD by spiking a quality system matrix at approximately two to three times the detection limit (for a single-analyte standard) or one to four times the detection limit (for a multi-analyte standard). This spike concentration establishes the LOD. It is specific to each combination of analyte, matrix, method (including sample preparation), and instrument configuration. The LOD must be verified quarterly. The following requirements apply to the initial detection limit/LOD determinations and to the quarterly LOD verifications.

- The apparent signal to noise ratio at the LOD must be at least three and the results must meet all method requirements for analyte identification (e.g., ion abundance, second-column confirmation, or pattern recognition.) For data systems that do not provide a measure of noise, the signal produced by the verification sample must produce a result that is at least three standard deviations greater than the mean method blank concentrations.
- If a laboratory uses multiple instruments for a given method the LOD must be verified on each.
- If the LOD verification fails, then the laboratory must repeat the detection limit determination and LOD verification at a higher concentration or perform and pass two consecutive LOD verifications at a higher concentration and set the LOD at the higher concentration.
- The laboratory shall maintain documentation for all detection limit determinations and LOD verifications.

Box D-14

Limit of Quantitation (LOQ): Establishment and Verification of LOQ (Requirement)

For DoD projects, the LOQ must be set within the calibration range prior to sample analysis. At a minimum, the LOQ must be verified quarterly.

The laboratory procedure for establishing the LOQ must empirically demonstrate precision and bias at the LOQ. The LOQ and associated precision and bias must meet client requirements and must be reported. If the method is modified, precision and bias at the new LOQ must be demonstrated and reported.

Establishing Project-Specific Requirements for Method Sensitivity

Project teams should establish their project-specific requirements for method sensitivity in terms of a Reporting Limit (RL) for each analyte and matrix. As defined in the DoD QSM, the RL is the lowest concentration value specified by the client that meets project requirements for reporting quantitative data with known precision and bias for a specific analyte in a specific matrix. The LOQ cannot be greater than the RL, if precision and bias of the RL and LOQ are the same. If the LOQ for a particular analytical method or laboratory cannot meet the RL, then a project team has three options:

1. Improve analyst performance or modify the method to achieve a lower LOQ.
2. Select a different method with an LOQ less than or equal to the RL.
3. Raise the RL.

Please note that precision and bias must be taken into consideration when assessing the LOQ versus the RL. Also note that data below the RL can be reported; however they are estimated values if less than the LOQ.

Fact Sheet: Detection and Quantitation — What Project Managers and Data Users Need to Know

Reporting and Flagging Analytical Data

Although data reporting and flagging requirements are project-specific, all reported LOD and LOQ shall be adjusted for the size of sample aliquots, concentration/dilution factors, and percent solids. In addition, the following example (based on Box 47 of DoD QSM Version 4.1) illustrates the proper use of the “U” and “J” data qualifier flags for non-detect and estimated analytical results, respectively.

- U – Analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample (* see Example, below).
- J – The reported result is an estimated value (e.g., matrix interference was observed or the analyte was detected at a concentration outside the quantitation range, see Box 33).

Example: DL = 2, LOD = 4, LOQ = 20, and RL = 30 with the precision and bias of the LOQ meeting those of the RL and all samples are undiluted.

Sample #1: Analytical result: Non-detect	Reported result: <4 U
Sample #2: Analytical result: 3	Reported result: 3 J
Sample #3: Analytical result: 10	Reported result: 10 J
Sample #4: Analytical result: 20	Reported result: 20
Sample #5: Analytical result: 30	Reported result: 30

Understanding and Documenting Uncertainty for Low-Concentration Data

As mentioned above, detection and quantitation limits are laboratory specific. Following are some steps Project Managers can take to document measurement uncertainty for low concentration data.

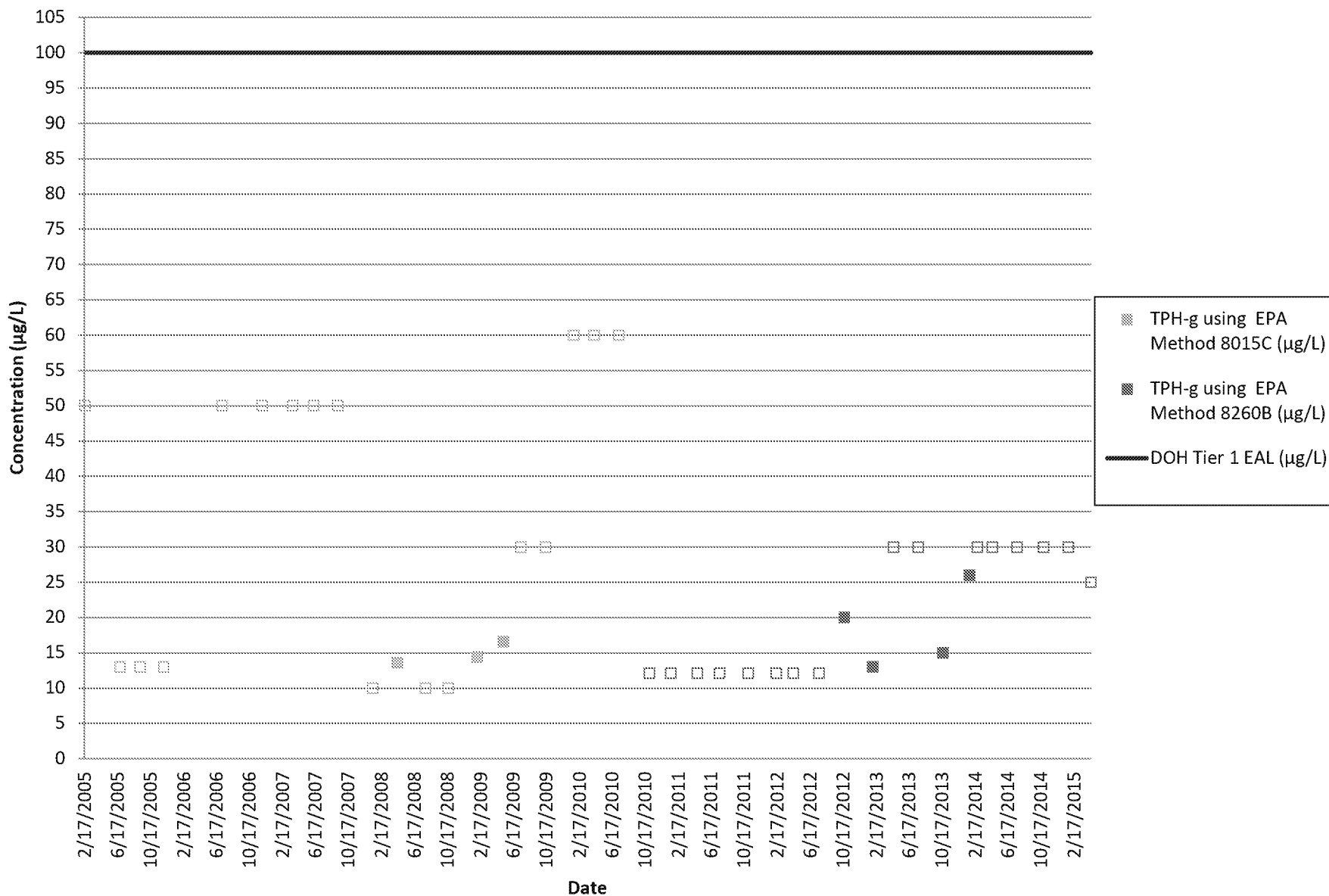
- As part of the laboratory selection process, provide the laboratory with project-specific RLs, including precision and bias, for each analyte and matrix. Ask the laboratory to provide its DL, LOD, and LOQ with associated precision and bias for each target analyte, in each matrix of concern (e.g., reagent water, clean sand, etc.), and verify that these values meet project-specific RLs. Request laboratory SOPs for establishing the DL and for establishing and verifying the LOD and LOQ.
- Ask the laboratory to verify the LOD by processing an LOD verification check sample with each batch of samples. This is a quality control sample that is spiked at a concentration at or slightly above the LOD to evaluate whether the analyte of interest is in fact “detectable” in the matrix of interest. To confidently report non-detects, set the reporting for non-detects to less than the LOD.
- If the project involves the collection of unusual or difficult matrices, or if the project-specific RL is near the LOQ, ask the laboratory to verify the LOQ in the project-specific matrix by analyzing a minimum of four replicate samples with known concentrations at the LOQ.
- Review the raw data (e.g., chromatograms) for low-concentration data. If a result is reported above the DL, make sure that the signal-to-noise ratio is at least 3.
- Compare sample results with blank results. If sample results (including chromatograms) cannot be distinguished from blank results, then they are not meaningful.

APPENDIX H

Historical Groundwater Exceedance Trends

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TPH-g Concentrations for RHMW01



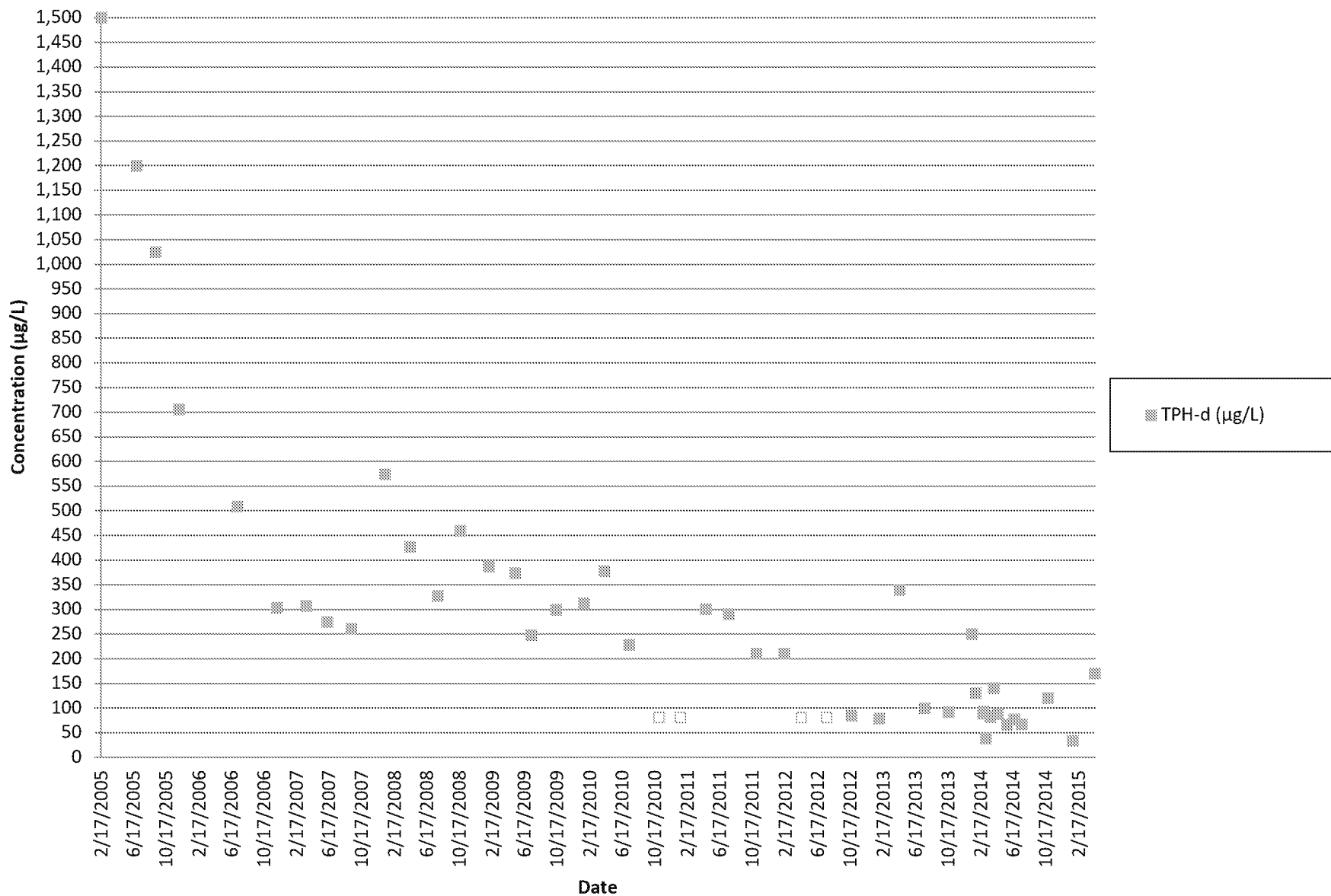
Unfilled boxes indicate non-detections. Data points for 2/17/2005 through 9/8/2005 and 12/6/2005 are the average of the primary and duplicate samples.

Possible laboratory contamination for 10/22/2012, 10/21/2013, and 1/28/2014 sampling events.

Method reporting limits (MRLs) are shown for February 2005, method detection limits (MDLs) are shown for June 2005 through October 2009, and limits of detection (LODs) are shown from January 2010 on.

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TPH-d Concentrations for RHMW01



Unfilled boxes indicate non-detections. LODs are shown. The Site-Specific Risk-Based Level (SSRBL) is 4,500 µg/L.

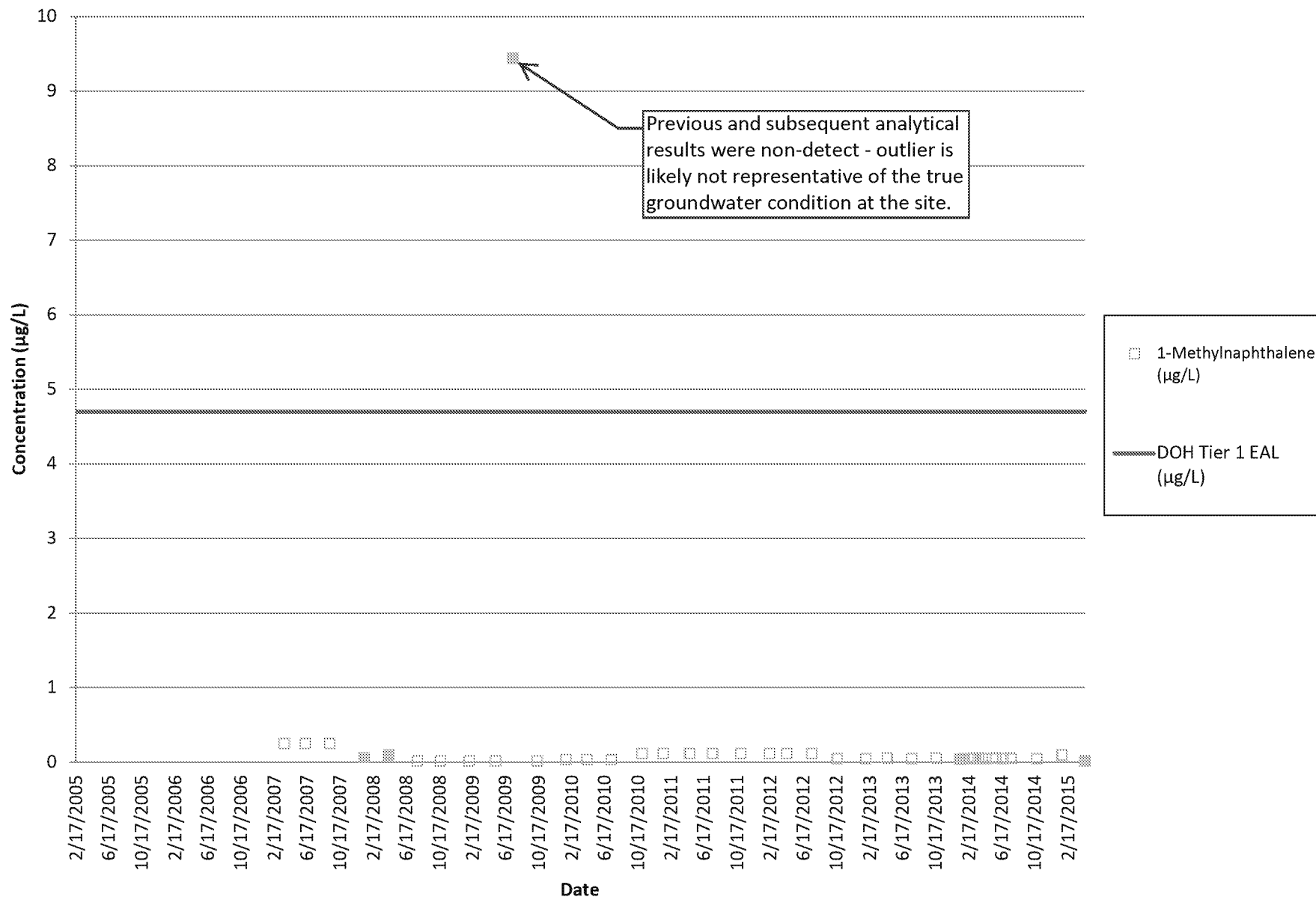
Numerous sample results had a chromatographic pattern that did not match the calibration standard.

The relatively high TPH-d values may not necessarily be indicative that there is diesel fuel or other petroleum products in the well.

Data points for 2/17/2005 through 9/8/2005 and 12/6/2005 are the average of the primary and duplicate samples.

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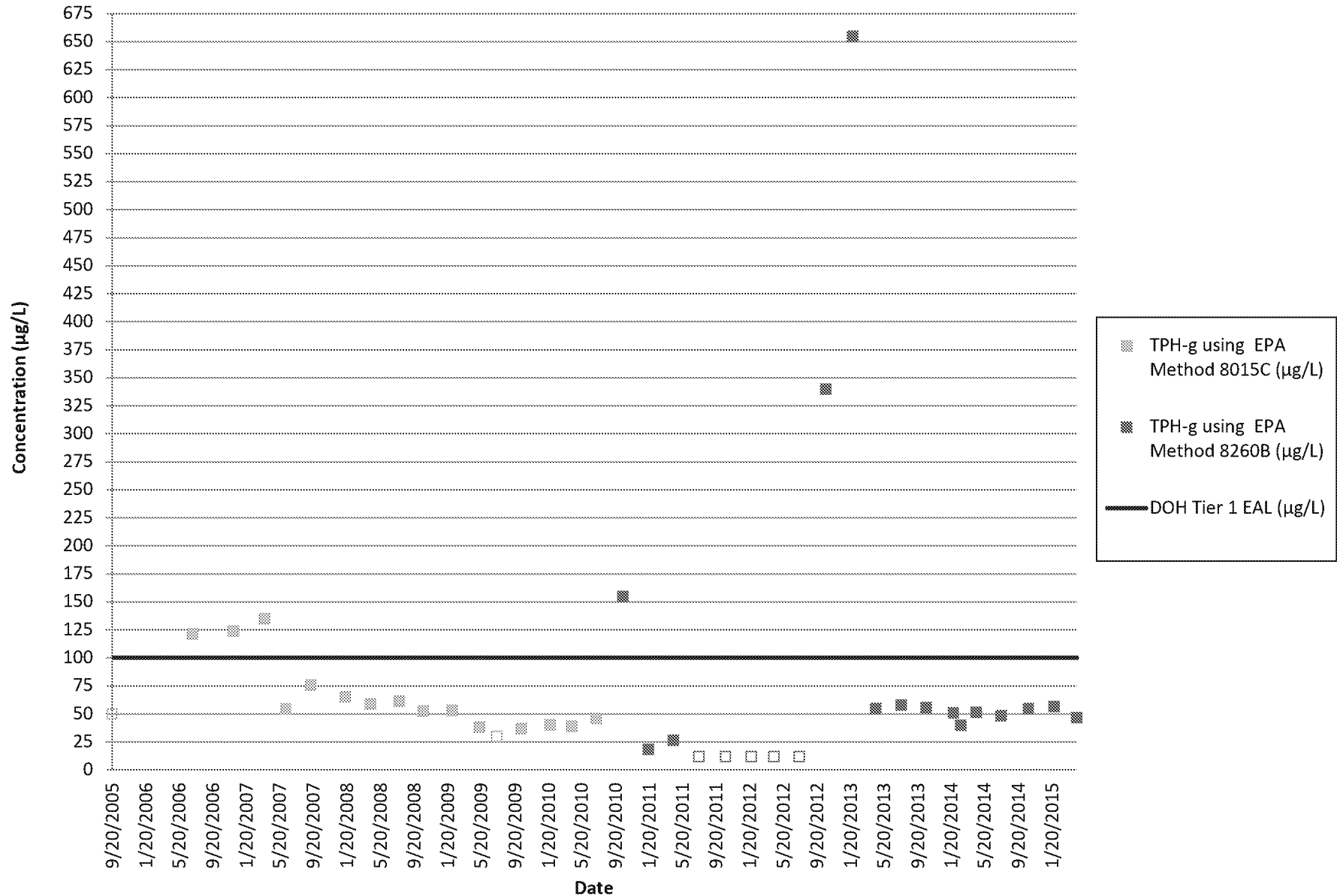
1-Methylnaphthalene Concentrations for RHMW01



Unfilled boxes indicate non-detections. MDLs are shown for June 2005 through October 2009, and LODs are shown from January 2010 on.

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TPH-g Concentrations for RHMW02



Unfilled boxes indicate non-detections. Data points for 9/20/2005 through 4/21/2014 are the average of the primary and duplicate samples.

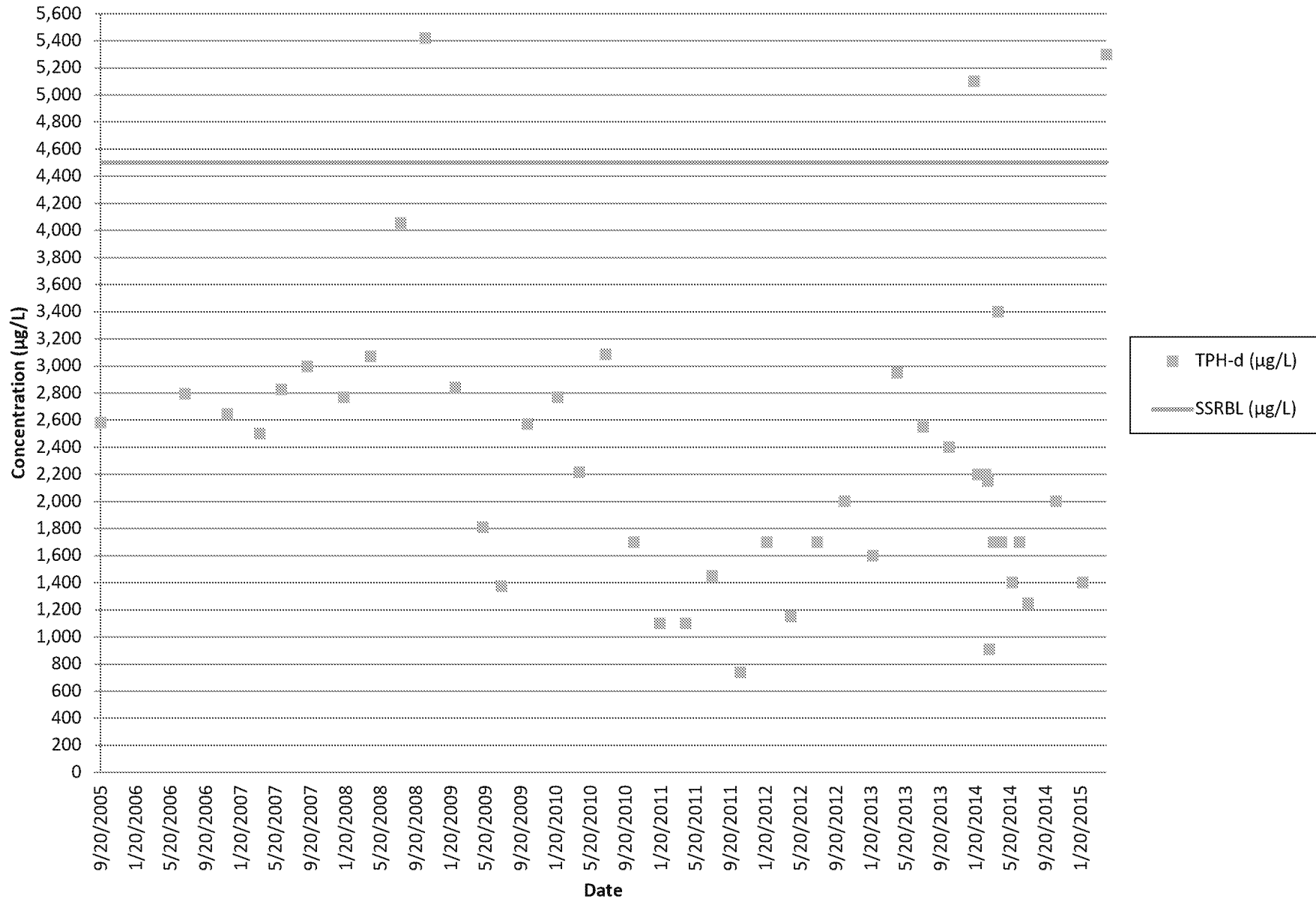
Possible laboratory contamination for 10/21/2013 and 1/28/2014 sampling events.

MDLs are shown for July 2009, and LODs are shown for September 2005 and from July 2011 on.

Primary sample results are shown for 1/26/2012 and 7/18/2012; all other concentrations are the average of the primary and duplicate sample results.

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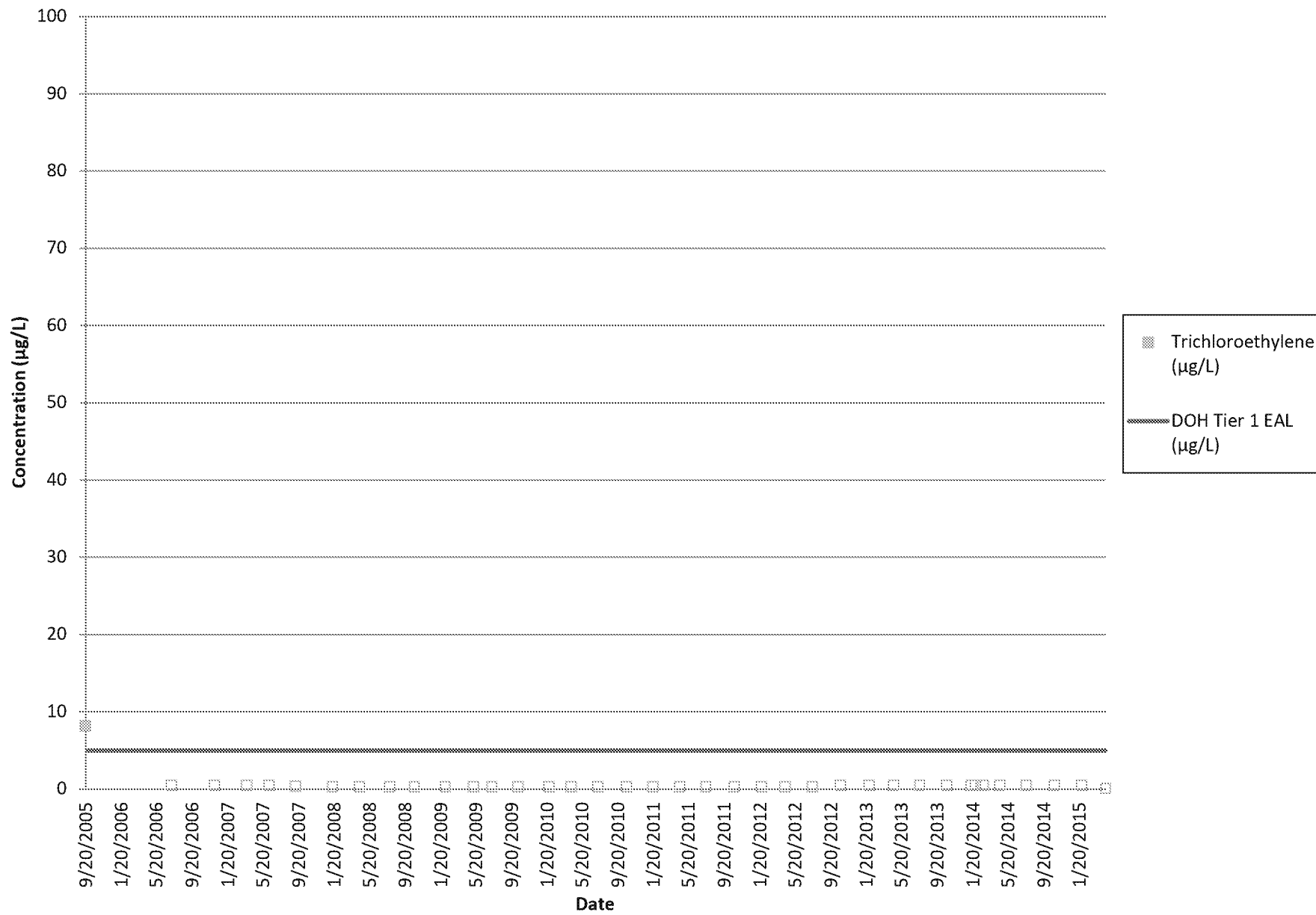
TPH-d Concentrations for RHMW02



Data points for 9/20/2005 through 4/21/2014 are the average of the primary and duplicate samples.
 Numerous sample results had a chromatographic pattern that did not match the calibration standard.
 The relatively high TPH-d values may not necessarily be indicative that there is diesel fuel or other petroleum products in the well.

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Trichloroethylene Concentrations for RHMW02

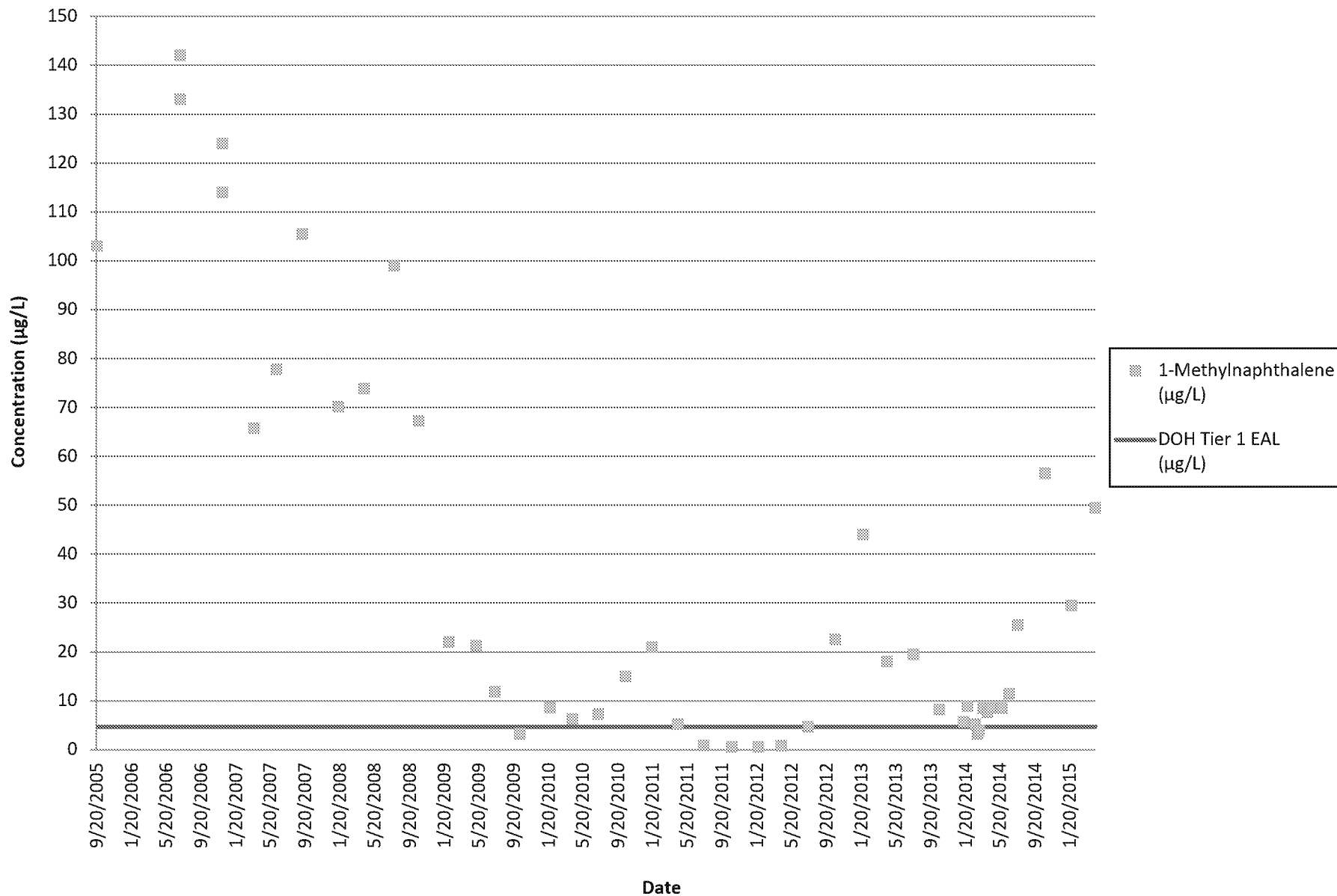


Data points for 9/20/2005 through 4/21/2014 are the average of the primary and duplicate samples.

Unfilled boxes indicate non-detections. MDLs are shown for July 2006 through October 2009, and LODs are shown from January 2010 on.

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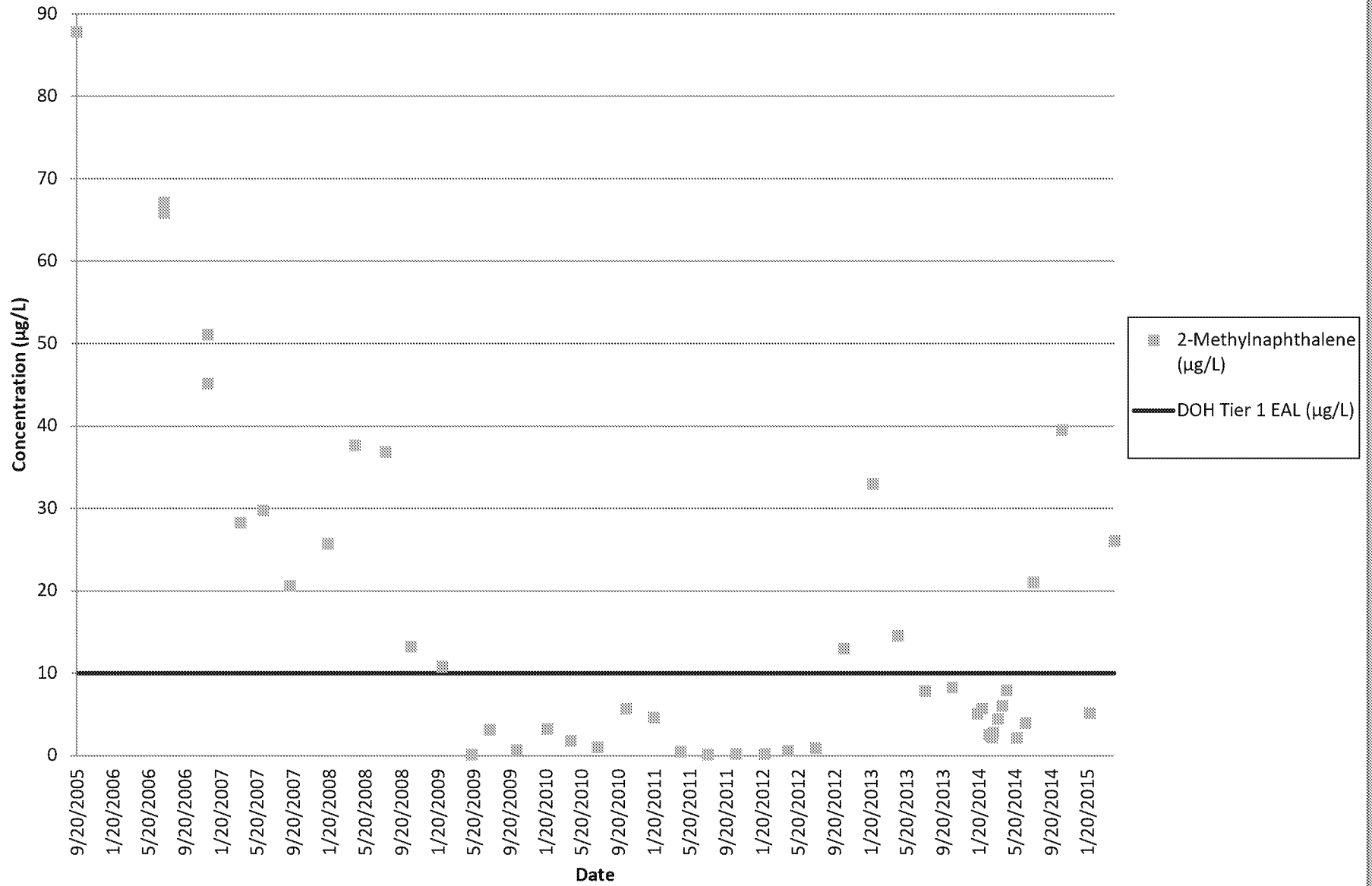
1-Methylnaphthalene Concentrations for RHMW02



Data points for 9/20/2005 and 3/27/2007 through 4/21/2014 are the average of the primary and duplicate samples.

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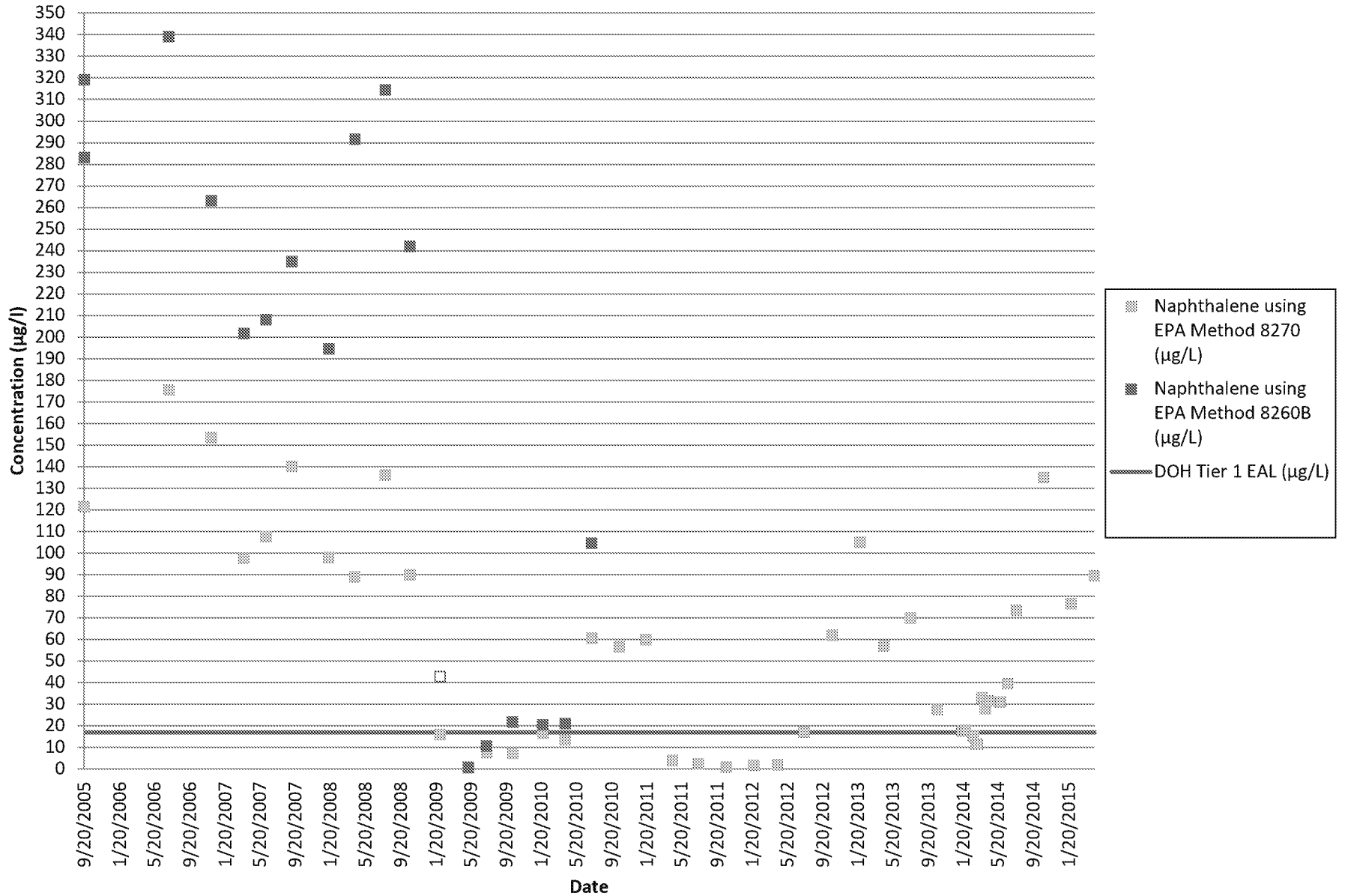
2-Methylnaphthalene Concentrations for RHMW02



Data points for 9/20/2005 and 3/27/2007 through 4/21/2014 are the average of the primary and duplicate samples.

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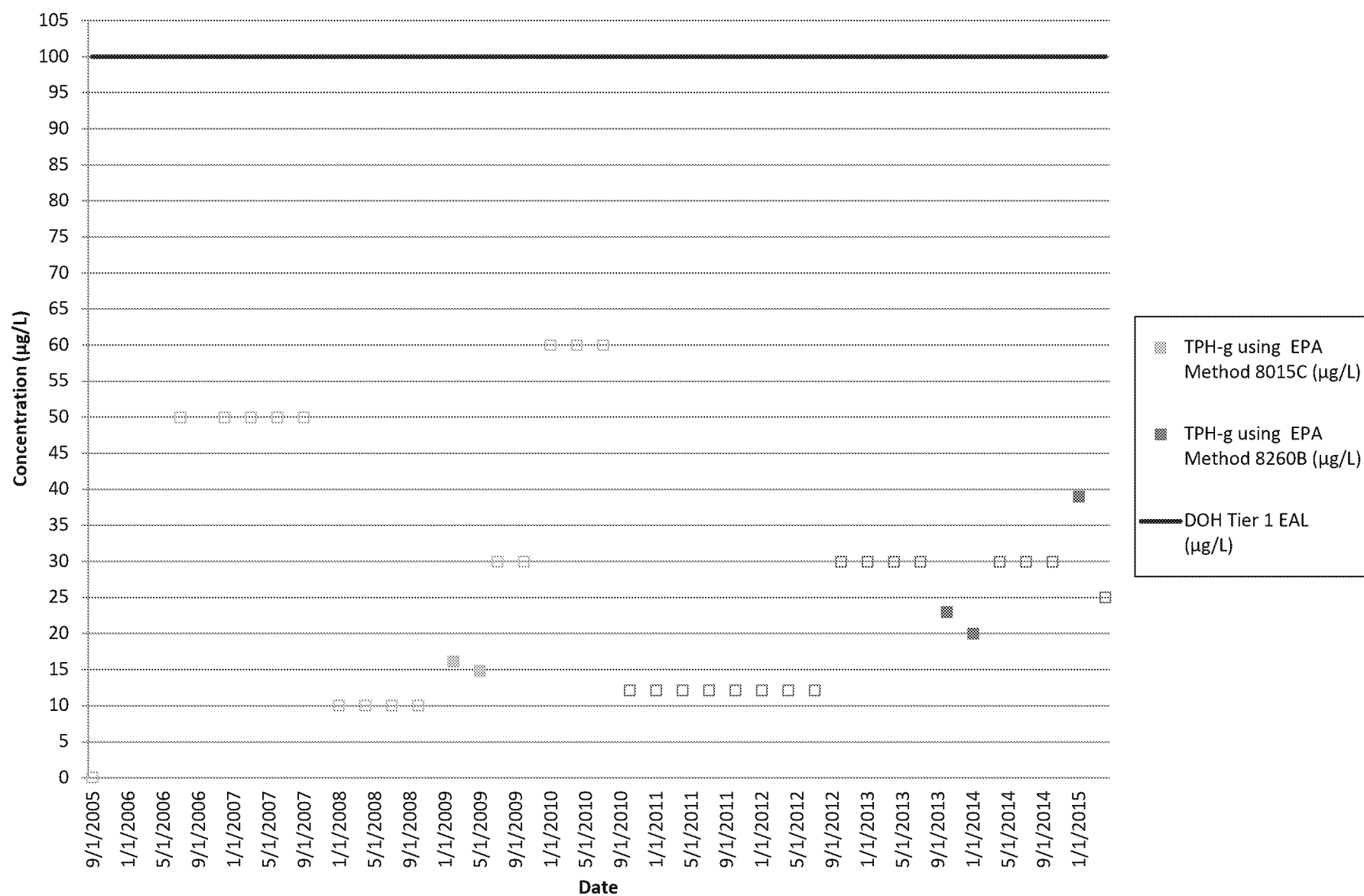
Naphthalene Concentrations for RHMW02



Possible laboratory contamination for 10/21/2013 and 1/28/2014 sampling events.
Unfilled boxes indicate non-detections. LODs are shown.

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TPH-g Concentrations for RHMW03

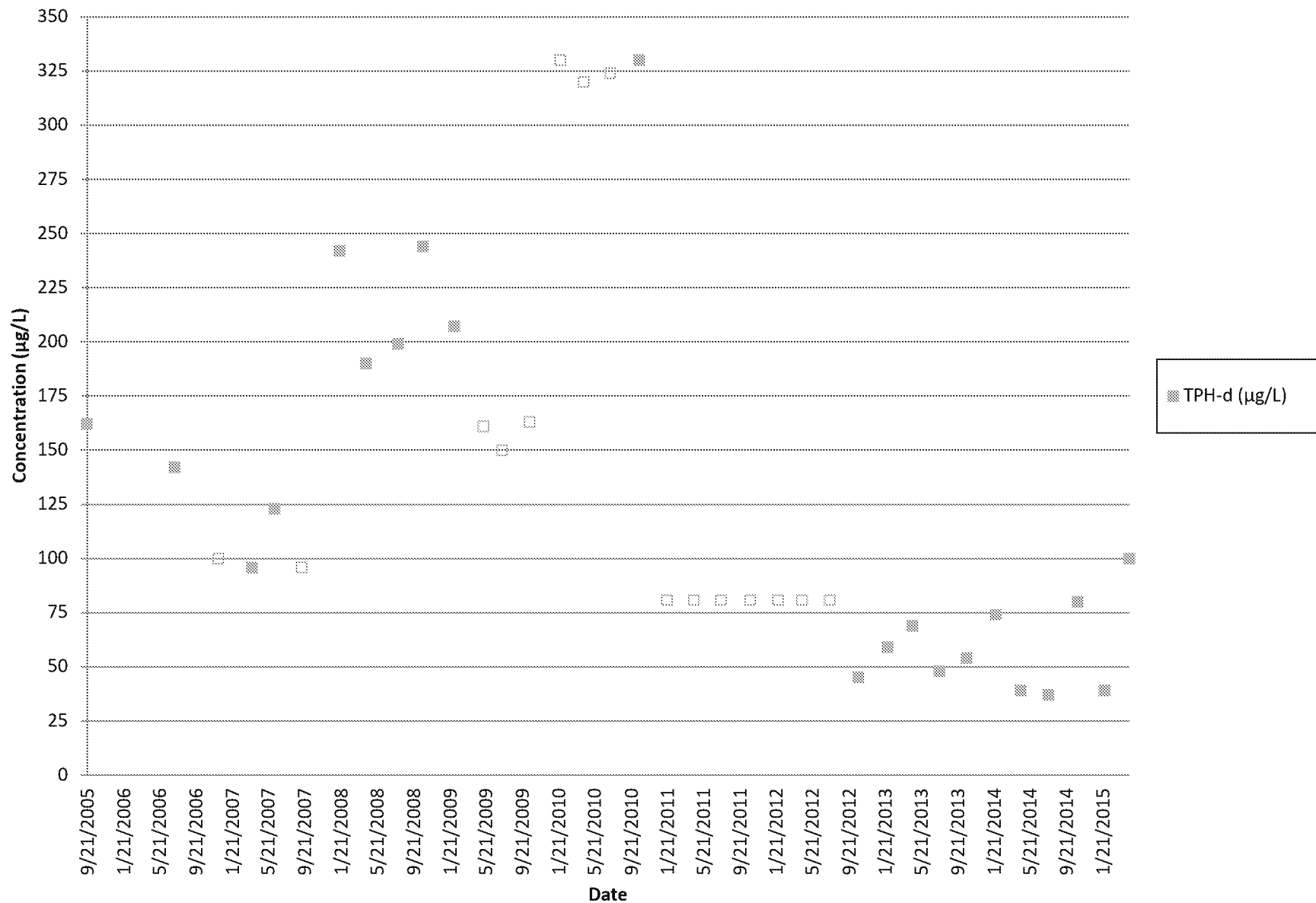


Possible laboratory contamination for 10/21/2013 and 1/28/2014 sampling events.

Unfilled boxes indicate non-detections. MDLs are shown for July 2006 through October 2009, and LODs are shown for September 2005 and from January 2010 on.

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TPH-d Concentrations for RHMW03



Unfilled boxes indicate non-detections. The Site-Specific Risk-Based Level (SSRBL) is 4,500 µg/L.

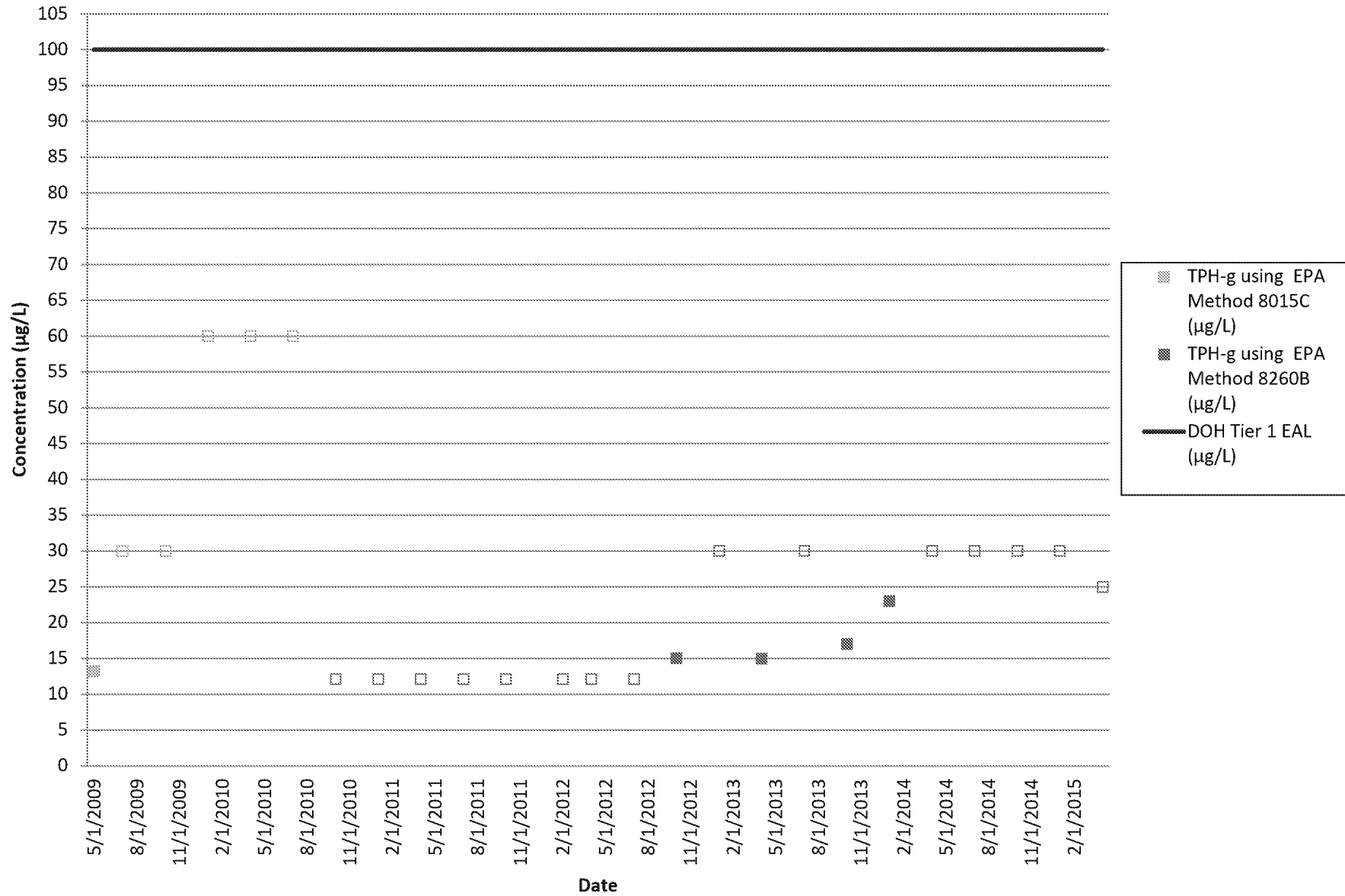
MDLs are shown for December 2006 through October 2009, and LODs are shown for September 2005 and from January 2010 on.

Numerous sample results had a chromatographic pattern that didn't match the calibration standard.

The relatively high TPH-d values may not necessarily be indicative that there is diesel fuel or other petroleum products in the well.

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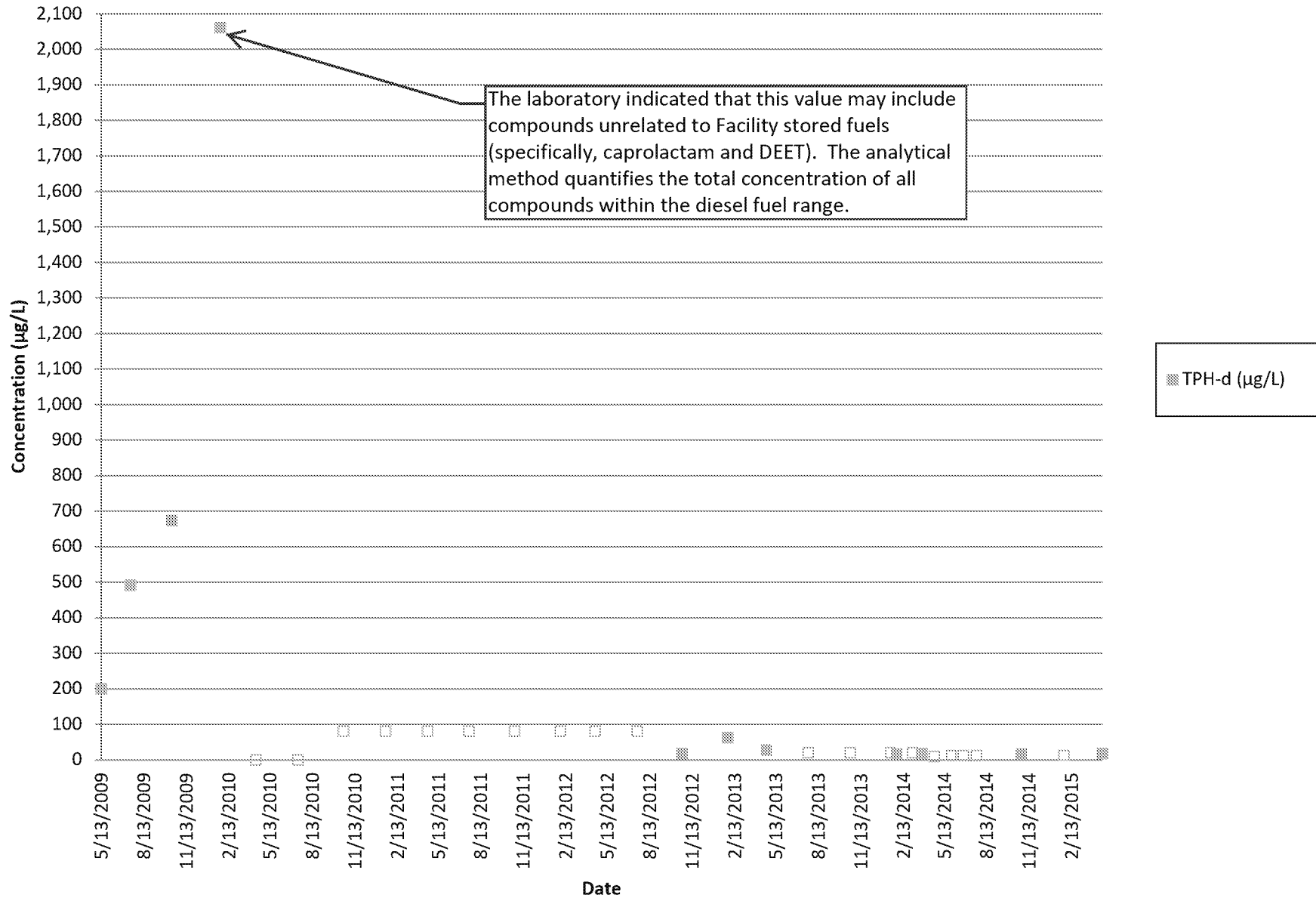
TPH-g Concentrations for RHMW05



Unfilled boxes indicate non-detections. Data point for 7/17/2012 is the average of the primary and duplicate samples. MDLs are shown for July and October 2009, and LODs are shown from January 2010 on. Possible laboratory contamination for 10/22/2012, 10/22/2013, and 1/29/2014 sampling events.

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TPH-d Concentrations for RHMW05



Unfilled boxes indicate non-detections. LODs are shown. The Site-Specific Risk-Based Level (SSRBL) is 4,500 µg/L.

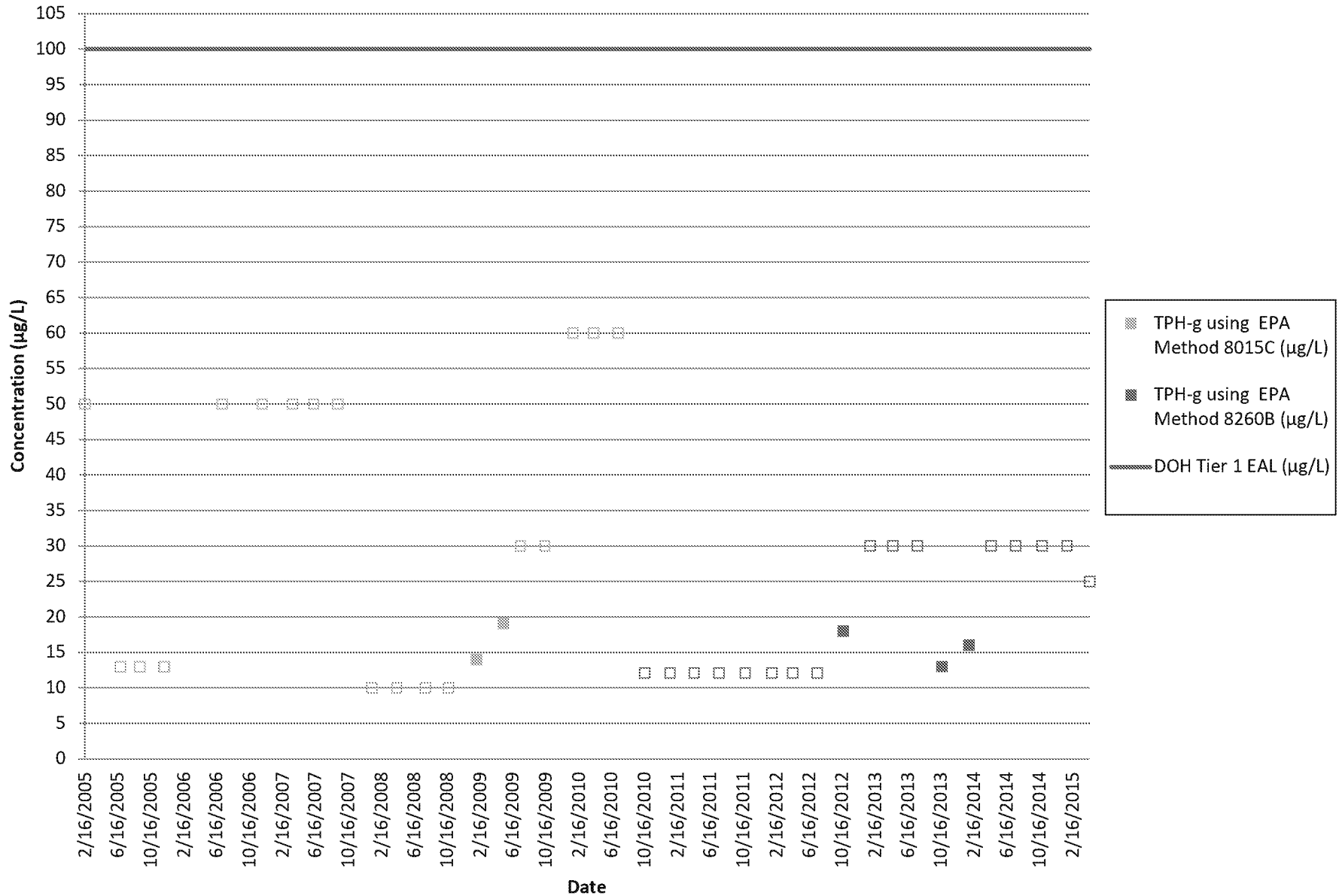
Data point for 7/17/2012 is the average of the primary and duplicate samples.

Numerous sample results had a chromatographic pattern that did not match the calibration standard.

The relatively high TPH-d values may not necessarily be indicative that there is diesel fuel or other petroleum products in the well.

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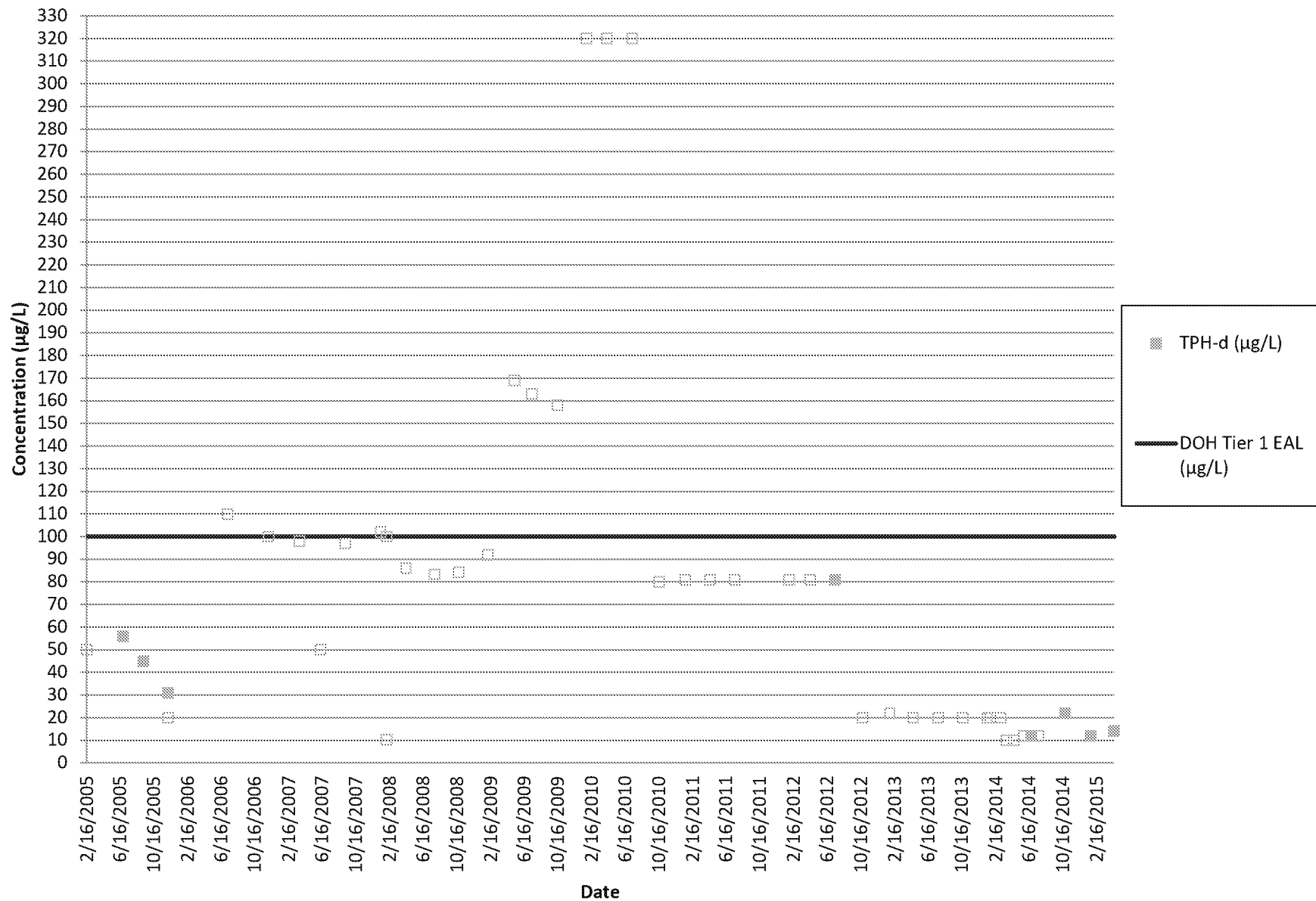
TPH-g Concentrations for RHMW2254-01



Unfilled boxes indicate non-detections. MRLs are shown for February 2005, MDLs are shown for June 2005 through October 2009, and LODs are shown from January 2010 on. Possible laboratory contamination for 10/22/2012, 10/22/2013, and 1/29/2014 sampling events.

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TPH-d Concentrations for RHMW2254-01



Unfilled boxes indicate non-detections. MRLs are shown for February 2005, MDLs are shown for December 2005 through October 2009, and LODs are shown from January 2010 on. Laboratory data rejected for 1/15/2008 sampling event. Numerous sample results had a chromatographic pattern that did not match the calibration standard. The relatively high TPH-d values may not necessarily be indicative that there is diesel fuel or other petroleum products in the well.

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APPENDIX I

Waste Disposal Manifest

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